CHEMATIX™

Chemical Management Software

Inventory Management Module

Version 11

CHEMATIX™
Manuals and Guides

The full list of comprehensive step-by-step instructional manuals includes:

CHEMATIX™ User Manual

CHEMATIX™ Environmental Health & Safety User Manual

CHEMATIX™ Store Management Manual

CHEMATIX™ Super User / System Administrator Manual

CHEMATIX™ Glossary

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Preface

CHEMATIX™ is an inventory tracking system that uses barcodes as a unique identifier to track chemical containers.

Once a chemical container and its Chemical Abstract Database (CAD) are associated, unique barcodes for each chemical container are generated, printed, and affixed to each container. In addition, each barcoded container is assigned a specific location. These barcoded chemical containers are utilized as the inventory system's method of tracking the container and its contents from cradle to grave. This permits users to track, inventory, and monitor the status of chemicals and their containers. Users only have access to inventory chemicals in their locations, with the exception of Environmental Health & Safety personnel, who have access to all locations. Barcodes are printed on adhesive labels which come in various sizes to accommodate different sizes of containers.

This Inventory Management Module permits users to enter, update, and view all inventory and chemical details pertaining to a chemical and its container.

Printer considerations
Before generating and printing barcodes, it is advised that you check your printer settings for optimum results. To correctly configure your printer, set the resolution to at least 600 dpi. Depending on your printer, this is usually "Best" or "Normal". This quality is a better option than "Draft" or a lower resolution.

NOTE:

- The program Adobe Acrobat Reader is required to generate and print barcodes.
- You must enable popups to run CHEMATIX™.

To enter the Inventory Management Module's main page [IM400], click the Inventory button at the top of the CHEMATIX™ screen:

Introduction

Welcome to **CHEMATIX™**, the first full-spectrum chemical management solution available in North America, with the full-featured capability of tracking chemicals from point of entry as inventory to point of exit as waste, as well as every point in between, with tremendous detail. With powerful modules to facilitate Inventory Management, Waste Management, Resource Management, Financial Management and Web Procurement, **CHEMATIX™** is at the cutting edge of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with all governmental regulations and mandates.

This comprehensive, web-based solution is comprised of five management modules:

Inventory Management

The essential management module, which allows **CHEMATIX™** to store detailed information about every substance in the system, providing the foundation for regulatory compliance, environmental safety, and inventory, research and budget control is built. All substances are tracked via scanning (or manual entry) of barcodes attached to each item upon acceptance into the system at point of entry. Storage locations, including warehouses, laboratories, and specific shelves, are also assigned barcodes and associated with a chemical inventory. A complete history of each bar coded item is maintained from point of entry to elimination as waste. The big picture view of chemical tracking and the ability to manage various aspects of warehouse and laboratory inventory of both chemical and non-chemical items is also facilitated. Detailed inventory item profiles of all tracked materials are uploaded to the system upon receipt of order utilizing data captured during the procurement process. A multitude of user-configurable reports and views can be generated to view specific location inventories, hazardous chemical counts, historical profiles, etc.

Web Procurement

The Web Procurement module empowers researchers to procure scientific chemicals and supplies via the web, from virtually any web-enabled device anywhere in the world. Users have access to instant purchasing, can search inventories and online catalogues, order supplies, manage existing orders and generate a variety of reports. Hazardous material purchases can be monitored and controlled, along with the strict regulation of possession limits and registration/approval processes for select agents within this module.

Waste Management

The Waste Management module enables laboratory and regulatory personnel to manage all aspects of chemical disposal. All waste and its corresponding status can be tracked in detail at any point in the system. This module is a critical component of environmental health and safety, assisting in the assurance that each institution is in regulatory compliance with all local, regional, state and federal governing authorities.

Fiscal Management

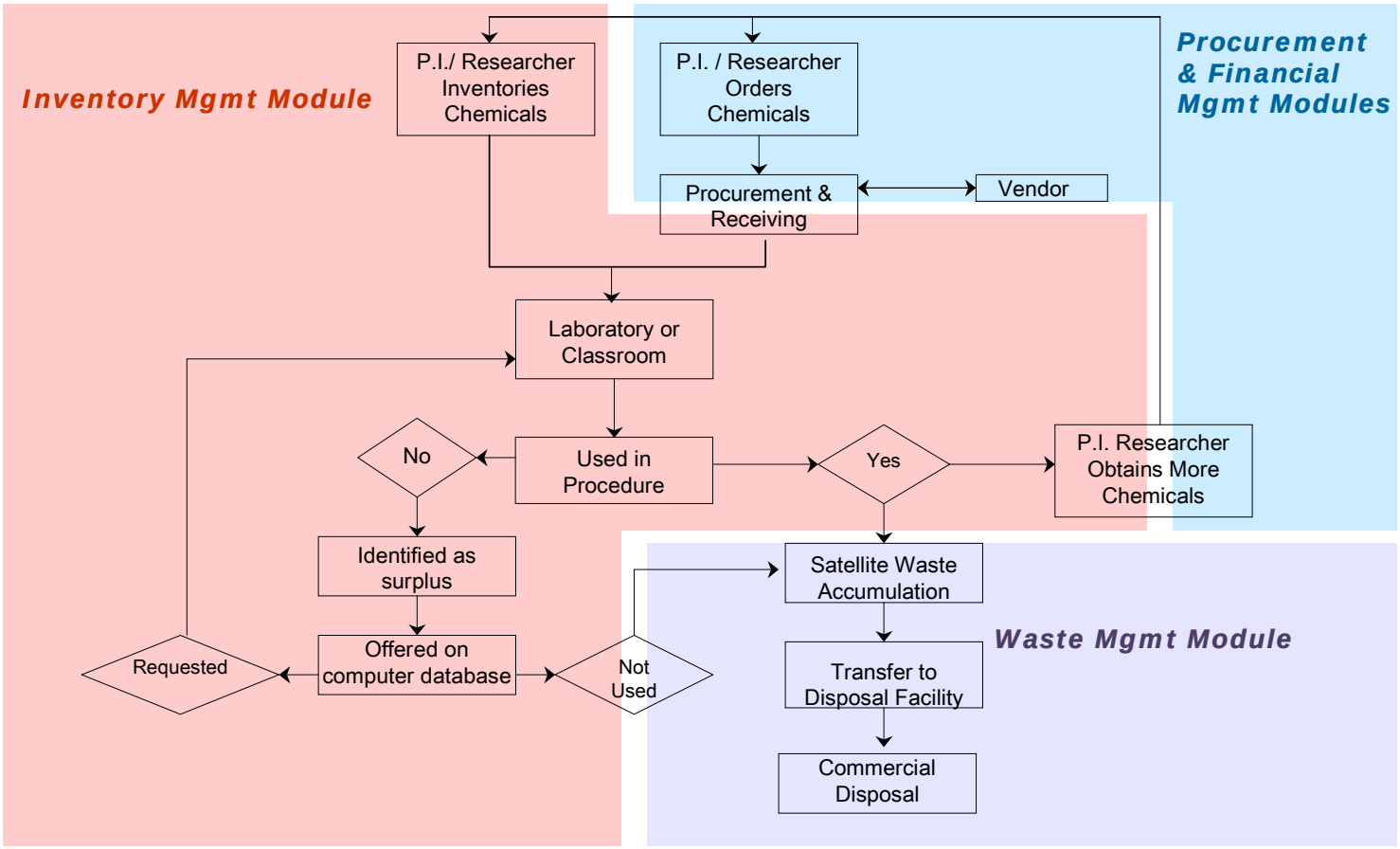
The Financial Management module provides access to a complete accounting system, capable, in part, of generating invoices, tracking payment, tracking account numbers against each purchase, accommodating credit card purchases, tracking and charging applicable sales tax, generating monthly billing for all customer orders and allowing for issuance of credits. Interfacing with existing accounting systems, this module provides account administrators with the ability to fully manage all fiscal responsibilities.

Resource Management

Resource Management provides and restricts access to all levels of the system. User profiles are created for varying levels of access including individual users, departments, vendors and customers. User administration is constructed hierarchically to ensure maximum system security.

CHEMATIX™ Process Flow Diagram

The following is a diagram displaying the process flow of chemicals within the system. The shaded areas represent the different modules, displaying the processes encompassed by each. Note that the diagram is intended to provide a general overview; comprehensive complexity or full system feature detail is not intended.



Add Items to Inventory

To add items to your inventory, click the Inventory button at the top of the CHEMATIX™ screen:

You will now see the opening page for Inventory Management [IM400]:

To add chemical items to your inventory, enter the Inventory Management main page [IM400]. Scroll down to the following text (the availability of these functionalities is optional and determined by your institution-specific rules and business practices):

Add Items to Inventory
Add Chemical Container(s) to Your Inventory
Distribute Chemical to Multiple Containers
Create a Chemical Mixture Container
Adjust Container Quantity

There are many options to add a chemical item to your inventory. The availability of these options is determined by your institution:

Option 1: Add Chemical Container(s) to Your Inventory

To Add Chemical Container(s) to Your Inventory, click this link.

You will now be transferred to the page for adding chemical containers to your inventory [IM535]:

Please see the **Add Chemical Container(s) to Your Inventory** section in this manual for full details of this procedure.

Option 2: Distribute Chemical to Multiple Containers

To Distribute Chemical to Multiple Containers, click this link.

You will now be transferred to the page for distributing one barcoded chemical into multiple containers [IM564]:

Please see the **Distribute Chemical to Multiple Containers** section in this manual for full details of this procedure.

Option 3: Create a Chemical Mixture Container

To Create a Chemical Mixture Container, click this link.

You will now be transferred to the page for putting several chemicals into one container in order to create a mixture [IM580]:

Please see the **Create a Chemical Mixture Container** section in this manual for full details of this procedure.

Additionally: Adjust Container Quantity

To Adjust Container Quantity, click this link.

You will now be transferred to the page where quantity tracking is supported and user can adjust container quantity.

Please see the **Adjust Container Quantity** section in this manual for full details of this procedure.

Add Chemical Container(s) to Your Inventory

This function is for associating a chemical container with its CAD (Chemical Abstract Database). Once this is done, unique barcodes for each chemical container are generated, printed, and affixed to each container. These barcoded chemical containers are utilized as the method in CHEMATIX™ to track a container and its contents from cradle to grave.

NOTE:
It may be helpful when adding chemical containers to your inventory to view Appendix #1: Add Chemical Container(s) to Your Inventory – Flowchart found at the end of this manual.

1. To access this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for Inventory Management [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

Add Items to Inventory
Add Chemical Container(s) to Your Inventory
Distribute Chemical to Multiple Containers
Create a Chemical Mixture Container
Adjust Container Quantity

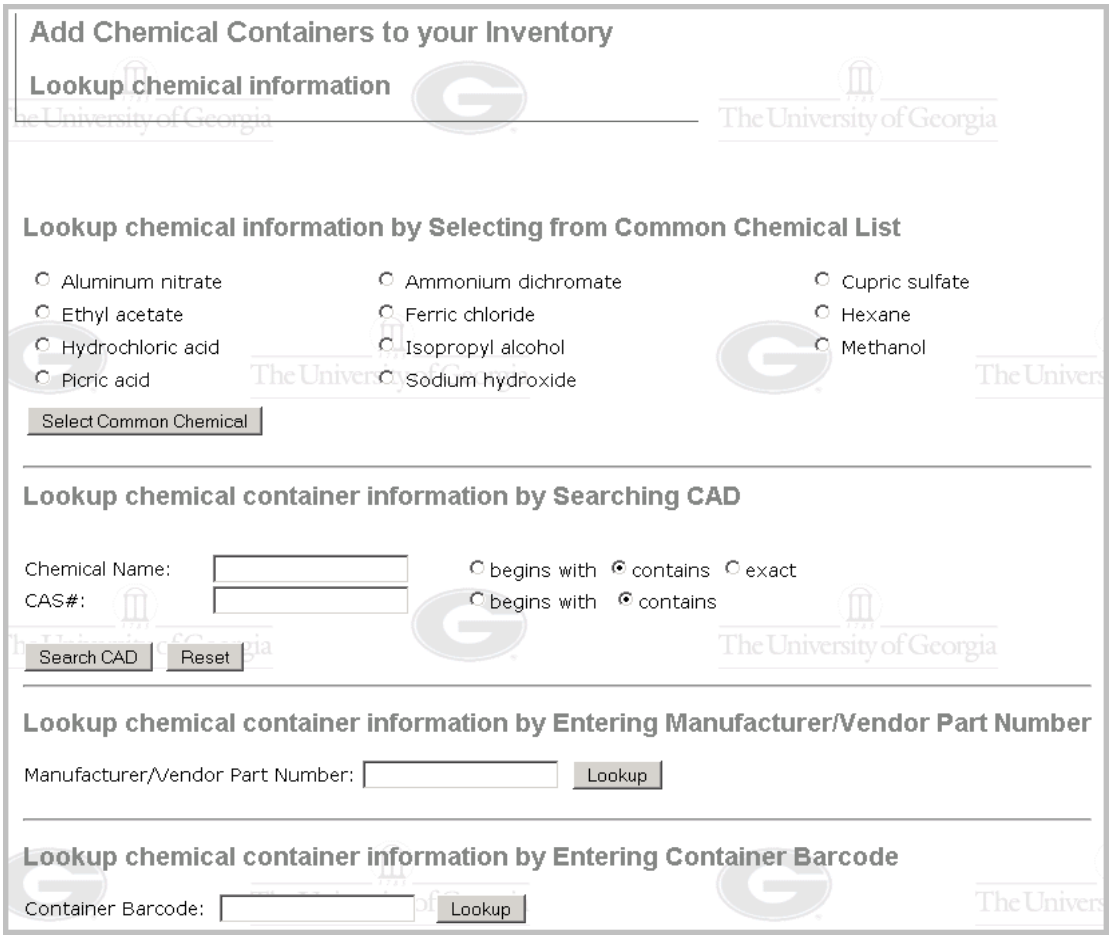
4. Click Add Chemical Container(s) to Your Inventory to add chemical container(s) to your inventory.

5. You will now be transferred to page [IM535]:

6. There are three steps to add chemical containers to your inventory:
   a. **Step 1: Look Up and Enter Chemical information**
   b. **Step 2: Enter Container Information**
   c. **Step 3: Enter, Generate, and Print Barcode Labels**

7. Proceed to **Step 1: Look up and Enter Chemical Information** section of this manual.

Step 1: Look up and Enter Chemical Information [IM535]

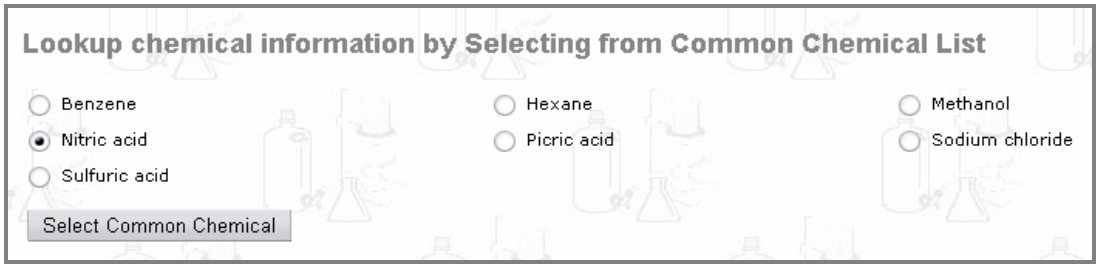


To add a chemical container to your inventory, you must first lookup the container's chemical information. You have three choices:

[Choice 1: Selecting a Chemical from the Common Chemical List]
[Choice 2: Searching CAD]
[Choice 3: Entering Manufacturer/Vendor Part Number]
[Choice 4: Entering Container Barcode]

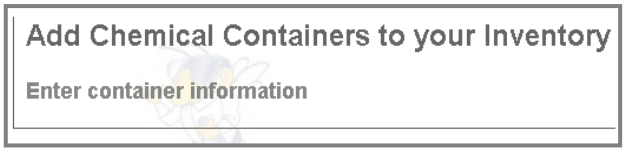
Choice 1: Selecting a Chemical from the Common Chemical List

1. To select a chemical from the Common Chemical List (This list is determined by your institution), click the radio button ◉ corresponding to the chemical that you wish to add to your inventory (in this example, Nitric acid).



2. Click Select Common Chemical.

3. You will now be transferred to the page for adding container information to your inventory [IM536]:



4. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

Choice 2: Searching CAD (Chemical Abstract Database)

1. To search CAD, enter either the chemical name or the CAS# (Chemical Abstracts Services Number) into the following fields:

2. Click Search CAD.

3. Click Reset to clear the Chemical Name: and CAS#: data fields

4. Enter ***Chemical Name*** or ***CAS#*** search criteria:

   NOTE:
   a. When using a chemical name to search CAD, remember that singular and plural forms of certain chemicals may refer to different chemicals.
   b. To refine your Chemical Name: or CAS#: search in CAD, click begins with, contains, or exact.

Existent CAD Entries

If the chemical name is in CAD, a generated list will appear at the bottom of the page, as in this example:

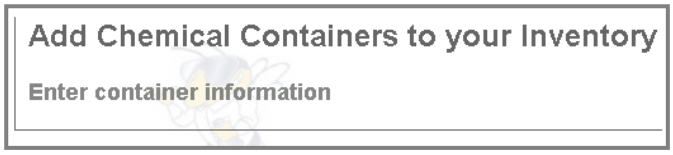
Chemical Name	CAS Number
Iron oxide dust and fume (as Fe)	1309-37-1
Saccharated iron oxide	8047-67-4
Iron oxide, spent, or Iron sponge, spent obtained from coal gas purification	1309-37-1
Iron oxide (FeO)	1345-25-1
Chromium iron oxide; Iron chromite brown spinel	12737-27-8

1. Click the CAS Number in the generated list (for example, 1309-37-1) to view page [IM575]:

The Chemical Abstract and MSDS Details include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information. (MSDS = Material Safety Data Sheet)

2. Click the Chemical Name from the generated list (for example, Iron oxide dust and fume (as Fe)) to add this chemical to your inventory.

3. You will now be transferred to the page [IM536]:



4. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

New CAD Entries

If the chemical name is NOT in CAD, the screen will scroll up, and the text *There are no results which match your search criteria.* will be displayed at the top of this page. The button Add a Chemical will also appear:

You now have two alternatives:

Alternative 1: Check and correct any typos

1. Check the spelling of the chemical name and the CAS# which you entered. Correct any typos.
2. Click Search CAD to find the chemical name in CAD.

3. If the chemical name is in CAD, a generated list will appear at the bottom of the page, for example:

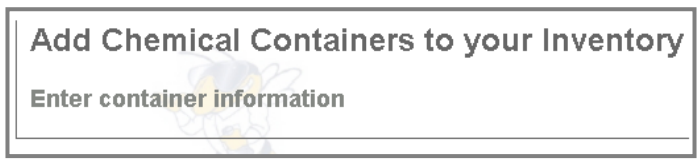
Chemical Name	CAS Number
Iron oxide dust and fume (as Fe)	1309-37-1
Saccharated iron oxide	8047-67-4
Iron oxide, spent, or Iron sponge, spent obtained from coal gas purification	1309-37-1
Iron oxide (FeO)	1345-25-1
Chromium iron oxide; Iron chromite brown spinel	12737-27-8

4. Click the CAS Number in the generated list (for example, 1309-37-1) to view page [IM575]:

The Chemical Abstract and MSDS Details include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information.

5. Click the Chemical Name from the generated list (for example, Iron oxide dust and fume (as Fe)) to add this chemical to your inventory.

6. You will be transferred to the page for adding container information [IM536]:

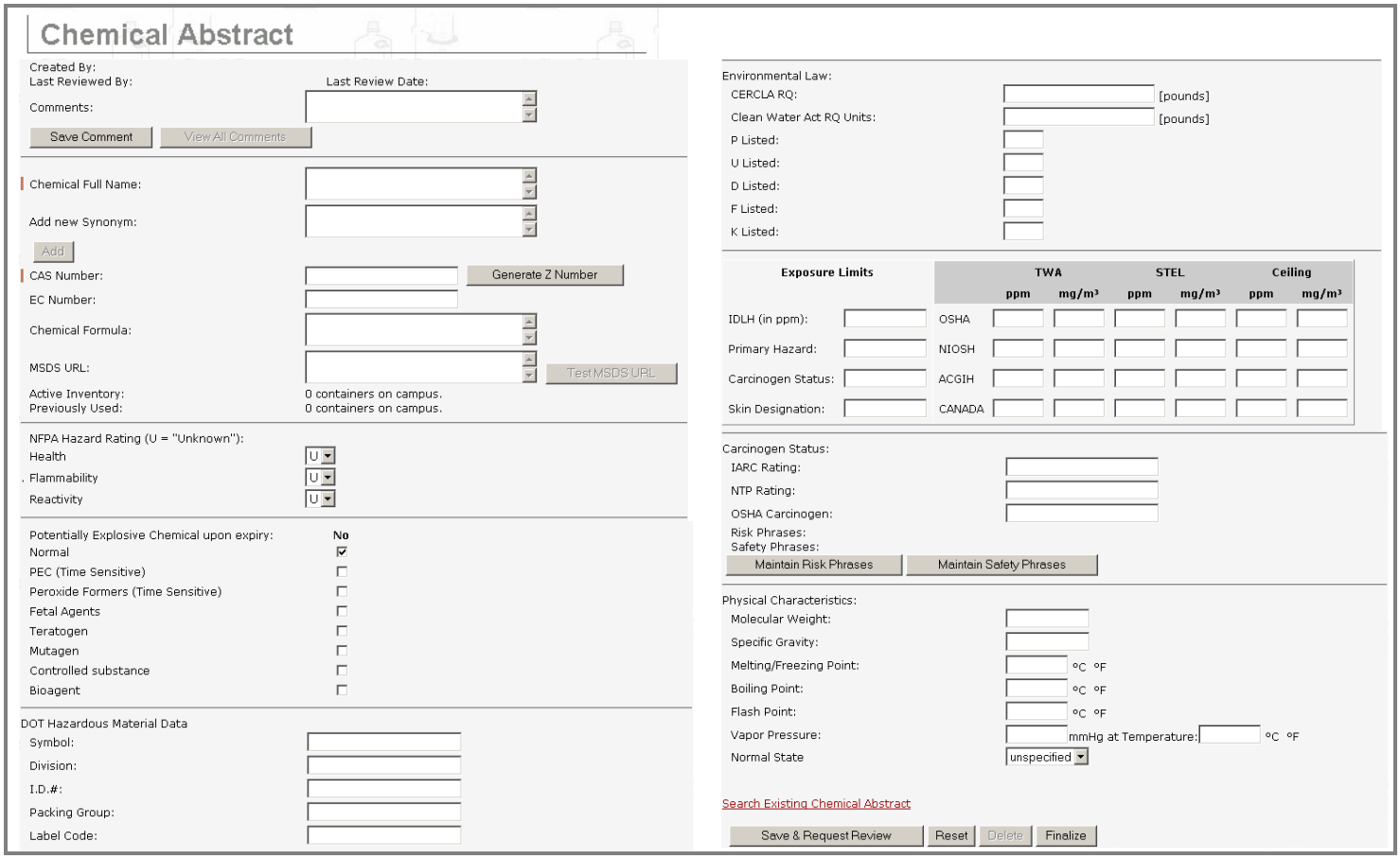


7. Proceed to Step 2: Enter Container Information section of this manual on page 29.

Alternative 2: Adding a "New" Chemical to CAD

If there are no typos in the chemical name or CAS# which you entered, this means that your chemical is "new" to CAD. As a result, you must create a new Chemical Abstract in CAD for your chemical.

To use this option, click [Add a Chemical]. You will now be transferred to page [IM572]:



You now have two selections to choose from when filling in this form:

Selection 1: Write a brief note regarding this chemical
Selection 2: Create a new Chemical Abstract in CAD

Selection 1: Write a brief note regarding this chemical

This function will permit you to write a brief note regarding this chemical, so that your institution's Department of Environmental Health & Safety can review your comments and/or concerns regarding this chemical.

1. Enter the [Chemical Full Name:] for this chemical in the following field:

2. If there is a synonym for the full chemical name, enter that into the Add new Synonym: field:

Click Add to add this synonym to your full chemical name.

3. Each chemical in CHEMATIX™ must have a CAS# or a Z-number, so that your chemical can be linked without ambiguity to CAD. Enter the CAS Number:.

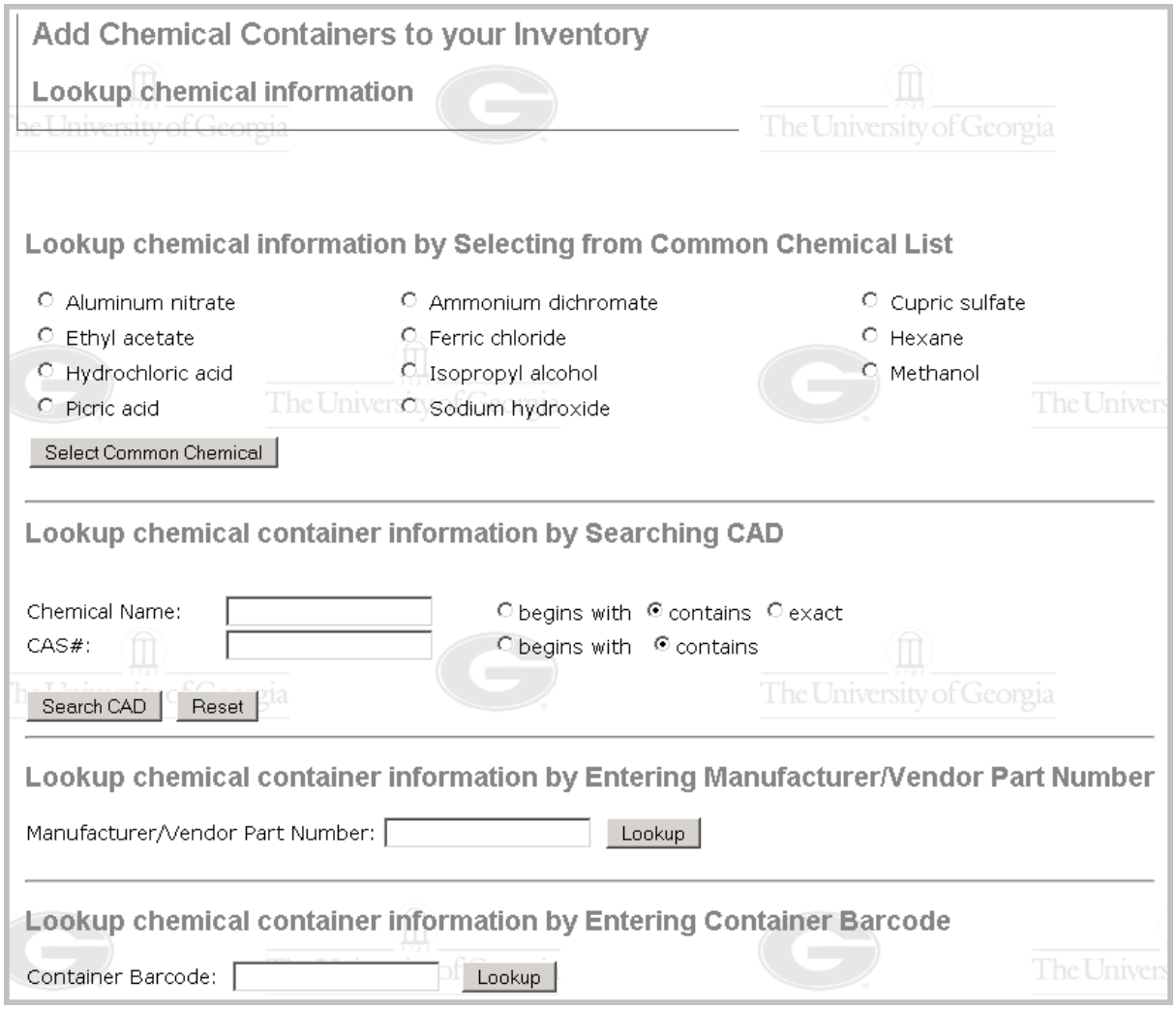
If your chemical has no CAS# in CAD, click Generate Z Number. A pseudo-CAS# will now be generated by CHEMATIX™ (for example, Z00078067). In CHEMATIX™, these pseudo-CAS#'s are called Z-numbers, as in the following example:

4. If you have comments or issues regarding this chemical, write a brief note in the Comments: field.

5. Click Save Comment after you have finished writing in your comments.

6. Your comments will now be sent to your institution's Department of Environmental Health & Safety for review.

7. You will be transferred back to page [IM535]:



8. Click Search CAD.

9. The Chemical Name link for the generated CAS# (Z00078104, for example) will appear under the Search CAD Reset Add a Chemical buttons:

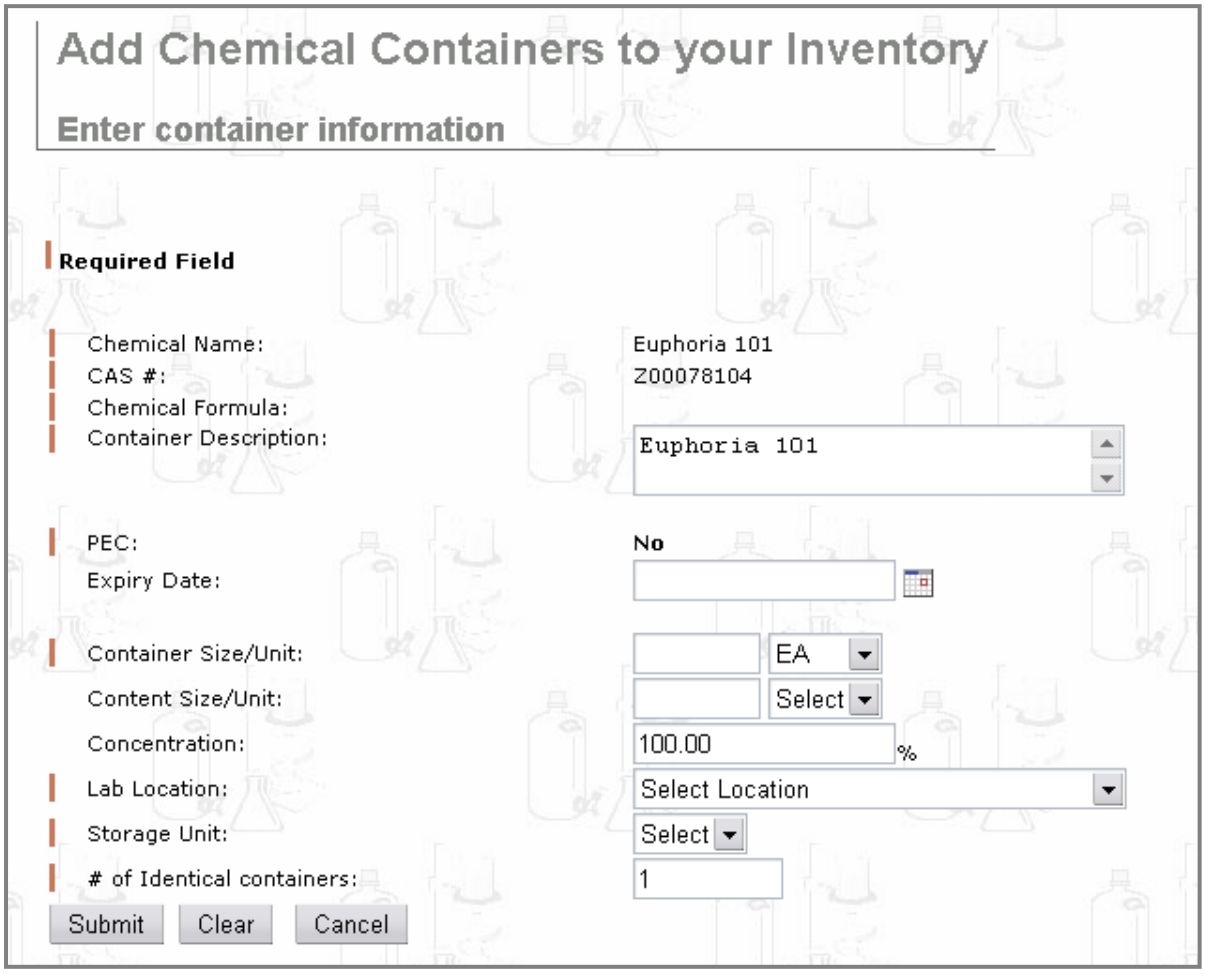
10. Click the Chemical Name link (in this example, Euphoria 101).

11. You will be transferred to page [IM536]:

12. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

Selection 2: Create a New Chemical Abstract in CAD

In creating your Chemical Abstract, all Required Fields have a bar next to them, as in the following example:



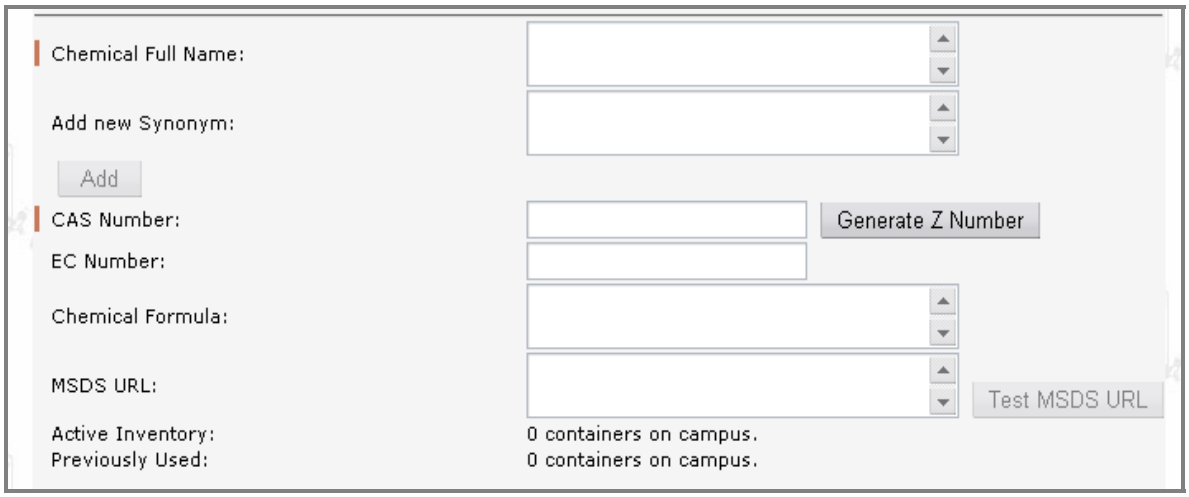
Part 1: CAD Entry Comments

If you have any comments regarding this chemical, write them into the following field. Your comments will be automatically reviewed by your institution's Department of Environmental Health & Safety:

Do **NOT** click Save Comment. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

Part 2: Entering Chemical Information

1. Scroll down to the following data fields:



2. Enter the Chemical Full Name:.

3. If there is a synonym for the full chemical name, enter that into the Add new Synonym: field.

Click Add to add this synonym to your full chemical name.

4. Each chemical in CHEMATIX™ must have a CAS#, so that that chemical can be linked without ambiguity to CAD.

Enter the CAS Number:.

If this chemical has no CAS#, click Generate Z Number. A pseudo-CAS# will now be generated by CHEMATIX™ (for example, Z00078067). In CHEMATIX™, these pseudo-CAS#'s are called Z-numbers, as in the following example:

5. Enter the EC Number:.

EC Numbers (Enzyme Commission Numbers) are a numerical classification scheme for enzymes, based on the chemical reactions that they catalyze.

6. Enter the Chemical Formula:

7. Enter the MSDS URL:

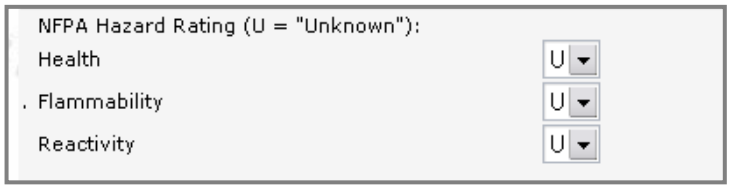
An **MSDS** (Material Safety Data Sheet) contains details of the hazards associated with a chemical and gives information on its safe use.

A **URL** (Uniform Resource Locator) is a web address where more information can be obtained about this chemical. Enter the web site for the MSDS for this chemical.

8. Click Test MSDS URL to test the MSDS web address. Through time, many web addresses change. Ensure that your MSDS is current.

Part 3: NFPA Hazard Rating

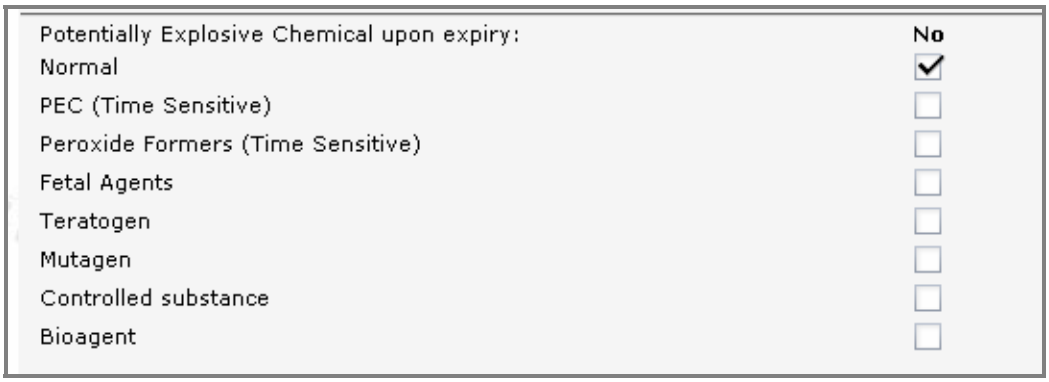
Scroll down to the following drop-down menus and select the appropriate hazard ratings:



NFPA (the National Fire Protection Association) is the leading authoritative source of technical background, data, and consumer advice on fire protection, problems, and prevention. The NFPA is responsible for classifying substances according to their fire and explosion hazard. In the NFPA drop-down menus, U = Unknown. 0 is the least severe hazard while 4 is the most severe hazard. The exact guidelines by which you can place a chemical into one of these categories are available in the NFPA standard. The NFPA homepage is: **http://www.nfpa.org.**

Part 4: General Hazards including PEC

1. Scroll down to the following click boxes to indicate general hazards:
   (The following list is for example only. Hazards are set and maintained on an institutional basis, so those available may differ from the example. For more information, please contact your CHEMATIX™ System Administrator)



2. Click the click boxes ☑ for all the hazards that apply.

   The default is Normal which means that there is no "unusual" hazard with this chemical. However, all chemicals should be treated with care and all safety regulations observed.

   PEC (Potentially Explosive Chemicals). Most chemicals that are used in research and teaching laboratories are stable and non-explosive at the time of purchase. Over time, some chemicals can oxidize, become contaminated, dry out, or otherwise destabilize to become Potentially Explosive Chemicals (for example, isopropyl ether, sodium amide, and picric acid). PEC's are particularly dangerous because they may explode if they are subjected to heat, light, friction, or mechanical shock.

   Peroxide Formers (peroxidizable materials) can form peroxides in storage, generally when in contact with the air. These peroxides present their most serious risk when the peroxide-contaminated material is heated or distilled, but they may also be sensitive to mechanical shock. Many of these are time sensitive.

   Fetal Agents are those chemical substances that can affect the health and well-being of the fetus.

   Teratogens are chemicals that may cause non-inheritable genetic mutations or malformations in the developing fetus (= birth defects). Teratogens may halt the pregnancy outright.

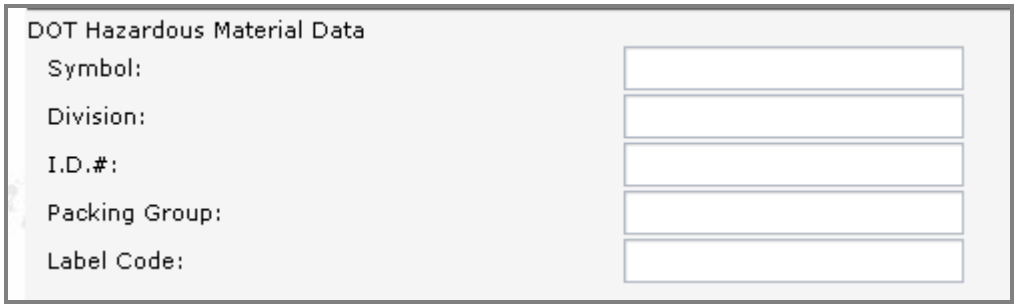
   Mutagens are agents that change the hereditary, genetic material that is a part of every living cell. Such mutations are probably an early step in the sequence of events that ultimately lead to the development of cancer.

   Controlled substances are drugs or chemical substances whose possession and use are regulated under the Controlled Substances Act.

   Bioagents (biological agents) are viral, bacterial, fungal, or parasitic substances that cause disease and/or illness. Bioagents can be used in biological warfare attacks.

Part 5: DOT Hazardous Material Data

Scroll down to the next area and fill in the appropriate fields for DOT Hazardous Material:



The **DOT**'s (Department of Transportation) Office of Hazardous Materials Safety has, as its mission, the minimization of the risks to life and property inherent in the commercial transportation of hazardous materials. The DOT homepage is at http://hazmat.dot.gov/.

Part 6: Environmental Law

Scroll down and fill in the following fields regarding Environmental Law:

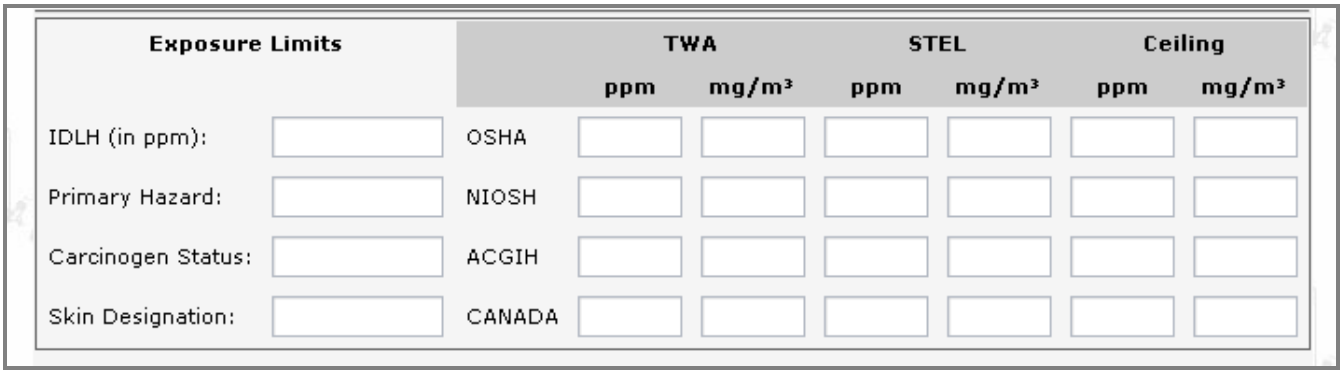
CERCLA RQ (the Comprehensive Environmental Response, Compensation, and Liability Act – Reportable Quantity). This is the maximum quantity of a CERCLA hazardous substance that can be released into the environment without notification to the EPA (the Environmental Protection Agency). Each CERCLA hazardous substance has an individual RQ assigned by the EPA. The CERCLA RQ's range from one pound to 5,000 pounds.

The **Clean Water Act** (CWA) is the cornerstone of surface water quality protection in the United States. The CWA sets water quality standards for all contaminants in surface waters. RQ Units (Reportable Quantity Units) are the maximum quantity of a pollutant from a point source that can be released into surface waters without notification to the EPA (the Environmental Protection Agency).

The **EPA** (the Environmental Protection Agency) is the US federal agency responsible for regulating environmental hazards. The EPA has predetermined that certain wastes are hazardous. These wastes are classified as P Listed, U Listed, D Listed, F Listed, and K Listed, among others. A laboratory chemical becomes a "waste" when you no longer intend to use it, regardless of whether or not it has been used or contaminated. The EPA homepage is: **http://www.epa.gov**.

Part 7: Exposure Limits

Scroll down to the next group of data fields. These deal with exposure to hazardous substances. Fill in the appropriate fields:



Exposure Limits			TWA		STEL		Ceiling	
			ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
IDLH (in ppm):		OSHA						
Primary Hazard:		NIOSH						
Carcinogen Status:		ACGIH						
Skin Designation:		CANADA						

IDLH (Immediately Dangerous to Life or Health) refers to a concentration, formally specified by a regulatory value, and defined as the maximum exposure concentration of a given chemical in the workplace from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects. This value is normally referred to in respirator selection.

Primary Hazard refers to the major or most important reason why this chemical is hazardous.

Carcinogen Status is the likelihood for a chemical to cause cancer in humans.

Skin Designation refers to the danger of a chemical substance to be absorbed through the skin.

TWA (Time Weighted Average) is a term used in the specification of Occupational Exposure Limits (OEL's) to define the average concentration of a chemical to which it is permissible to expose a worker over a period of time, typically 8 hours.

STEL (Short Term Exposure Limit) is the maximum permissible concentration of a material, generally expressed in ppm in air, for a defined, short period of time (typically 5 or 15 minutes, depending upon the country) that a person can be exposed to a certain chemical. This "concentration" is generally a time-weighted average (TWA) over the period of exposure. These values, which may differ from country to country, are often backed up by regulation and therefore may be legally enforceable.

Ceiling Level or **Ceiling Value** is the maximum permissible concentration of a hazardous material in the working environment. This level should not be exceeded at any time. It is usually (but not invariably) set somewhat above the relevant time-weighted average for the chemical.

OSHA (Occupational Safety and Health Administration) is a part of the U.S. Department of Labor. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA homepage is: **http://www.osha.gov**.

NIOSH (The National Institute for Occupational Safety and Health) is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. The NIOSH website is: **http://www.cdc.gov/niosh/homepage.html**.

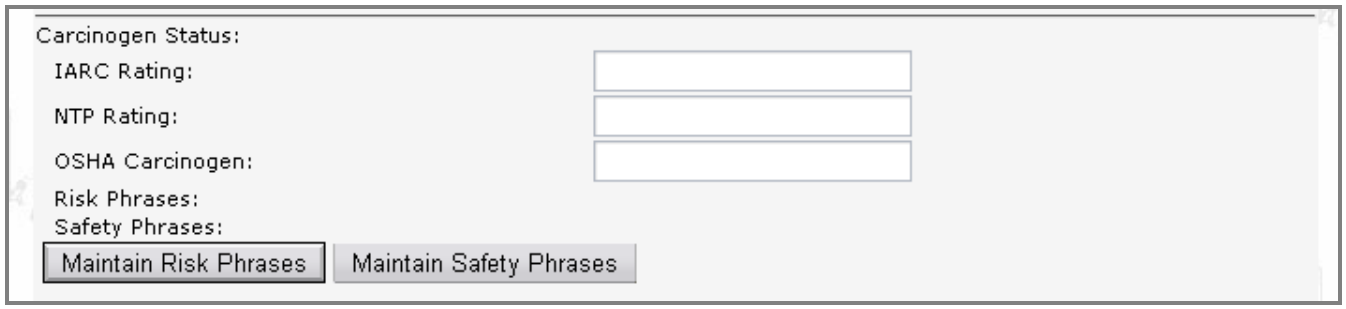
ACGIH (The American Conference of Governmental Industrial Hygienists) is a member-based organization and community of professionals that advances worker health and safety through education and the development and dissemination of scientific and technical knowledge. One of its principal tasks is to recommend TLV's for workplace exposure to chemicals. The ACGIH homepage is: **http://www.acgih.org/home.htm**.

TLV (Threshold Limit Value) is the maximum permissible concentration of a material, generally expressed in parts per million in the air for some defined period of time (often 8 hours, but sometimes for 40 hours per week over an assumed working lifetime).

Canada refers to Canadian government regulations.

Part 8: Carcinogen Status

The following data fields deal with the status of your chemical as a carcinogen. A carcinogen is a chemical that causes or that may cause cancer.



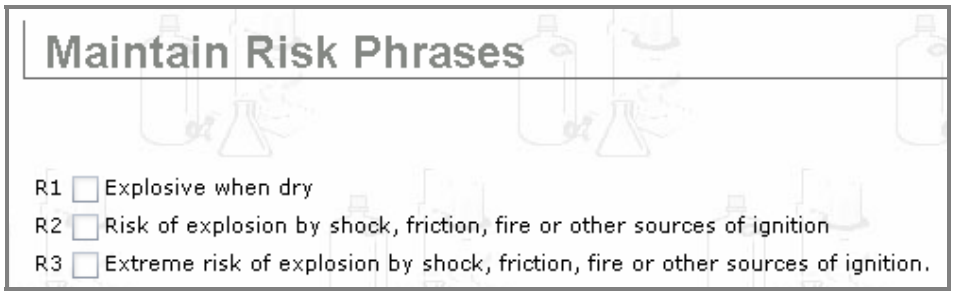
IARC (International Agency for Research in Cancer) is part of WHO (the World Health Organization). The IARC coordinates and conducts research on the causes of human cancer, the mechanisms of carcinogenesis, and develops scientific strategies for cancer control. The IARC home page is: **http://www.iarc.fr**.

NTP (the National Toxicology Program) tests chemicals and reviews evidence relating to the possibility that a chemical may act as a carcinogen. The NTP identifies toxicants and tries to understand and minimize the potential impacts of their exposures on human health. The NTP home page is: **http://ntp-server.niehs.nih.gov**.

OSHA (Occupational Safety and Health Administration) is a part of the U.S. Department of Labor. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA homepage is: **http://www.osha.gov**.

Part 9: Risk Phrases

1. Scroll down and click Maintain Risk Phrases to associate risk phrases with this chemical. Clicking this button will transfer you to page [IM582]:


Maintain Risk Phrases
R1 Explosive when dry
R2 Risk of explosion by shock, friction, fire or other sources of ignition
R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

2. There are 68 risk phrases from which to choose. Click the click boxes ☑ for all phrases that apply.

3. Click Submit to associate the selected risk phrases with your chemical.

4. Click Reset to clear this form of all checked boxes. You can now begin to re- select the appropriate risk phrases.

Part 10: Safety Phrases

1. Click Maintain Safety Phrases to associate safety phrases with this chemical. You will be transferred to page [IM583]:

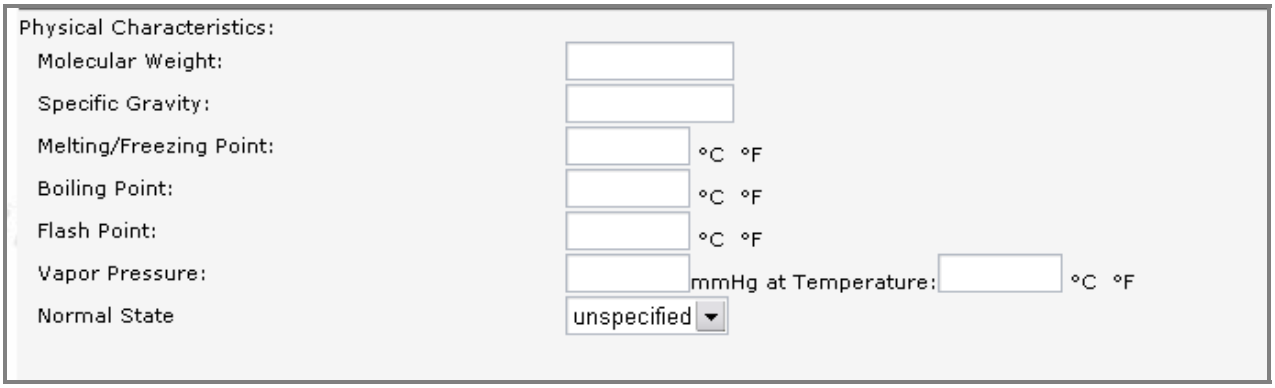
2. There are 64 safety phrases from which to choose. Click the click boxes ☑ for all phrases that apply.

3. Click Submit to associate the selected safety phrases with your chemical.

   Click Reset to clear this form of all checked boxes. You can now begin to re-select the appropriate safety phrases.

Part 11: Physical Characteristics

Enter the physical characteristics of your chemical into the final group of data fields:



Part 12: To Finish

When you have finished filling in the appropriate Chemical Abstract fields, scroll down to the bottom of the page where you will see the following buttons: Save & Request Review Reset

You now have two options:

Option 1: Reset

1. Click Reset to clear this form of all inputted data, except for the data that you uploaded from the Chemical Abstract page [IM573] (for example, the Chemical Full Name:, CAS Number: and Chemical Formula: fields).

2. You can now begin to fill in the Chemical Abstract form again.

3. Return to **Create a New Chemical Abstract in CAD** section of this instruction manual for help in completing the empty fields on this Chemical Abstract page [IM572].

Option 2: Save & Request Review

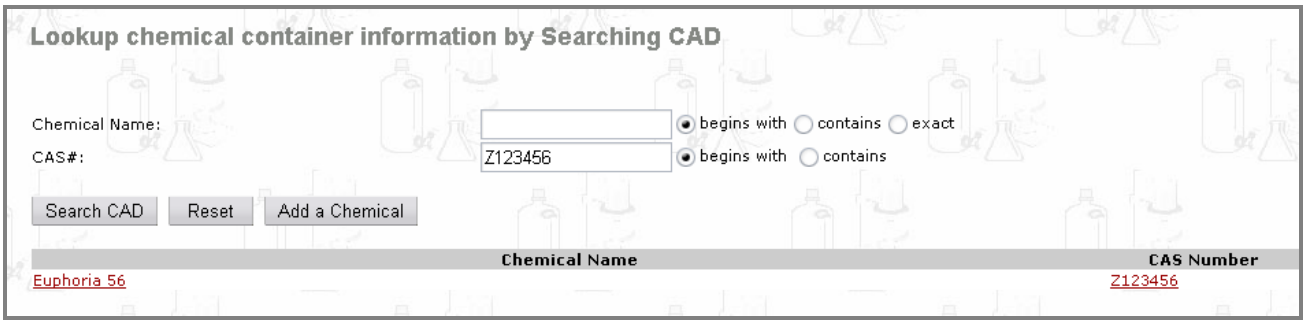
1. Click Save & Request Review to save the data entered in this form and to request a review of this data by your institution's Department of Environmental Health & Safety.

   NOTE: All newly created Chemical Abstracts in CAD will be flagged for review by your institution's Department of Environmental Health & Safety.

2. You will now be transferred to page [IM535]:

3. Scroll down to the bottom of the page and click Search CAD:

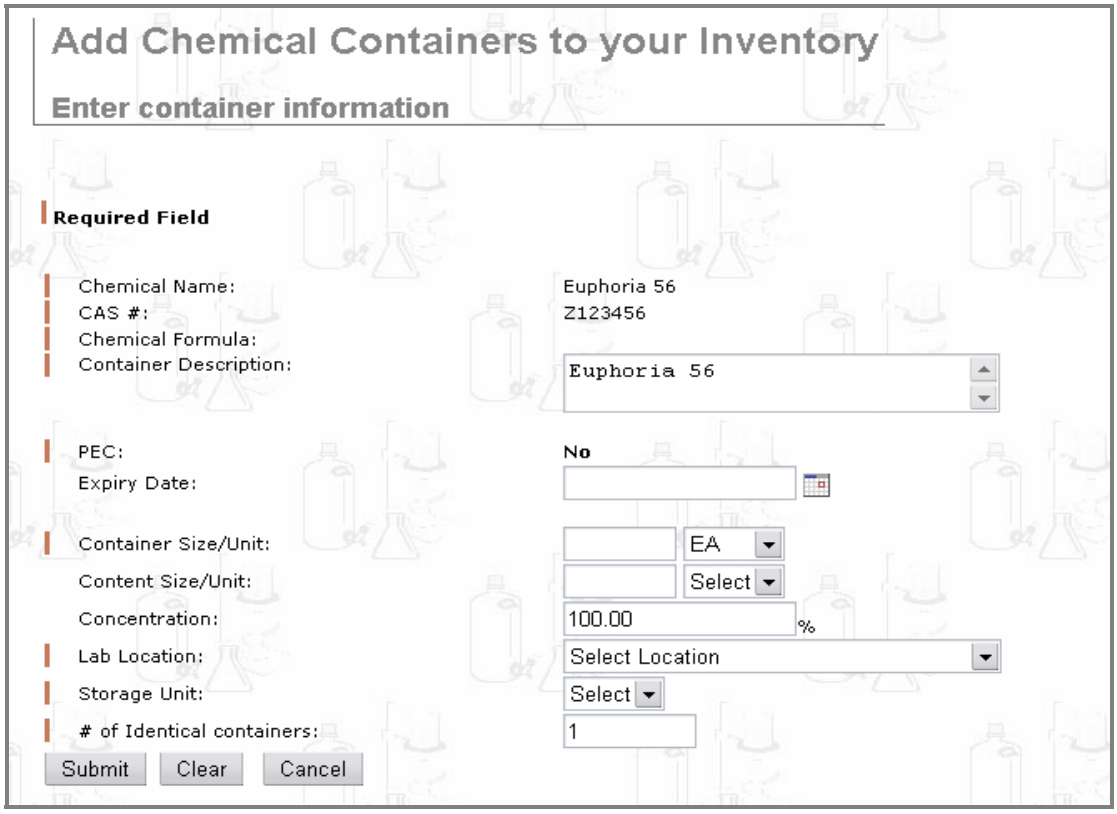
4. The link to your newly created chemical will be created below:



5. Click the Chemical Name link (in this example, Euphoria 56).

6. You will be transferred to page [IM536]:

7. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

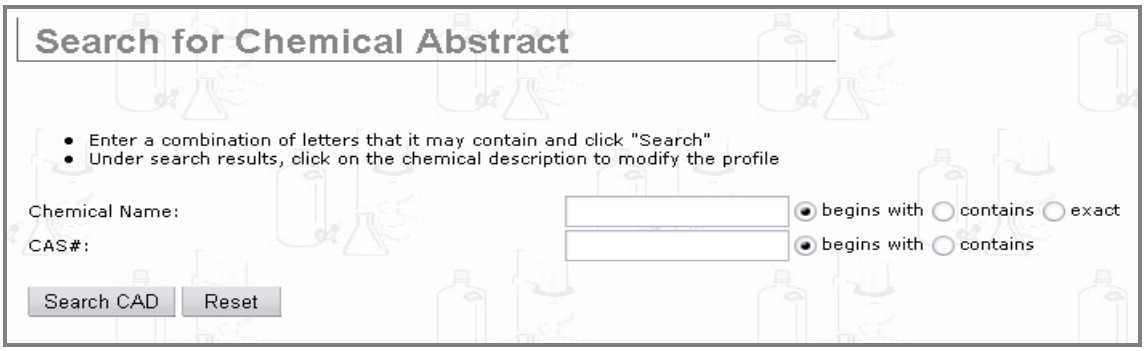


Part 13: Search an Existing Chemical Abstract

This function will permit you to search CAD by Chemical Name or CAS#. You can then link an existing CAD to your chemical.

1. Click the link Search Existing Chemical Abstract at the bottom of the page to search a chemical in CAD.

2. You will now be transferred to page [IM573]:



3. Enter either the Chemical Name: or the CAS#: into the appropriate fields.

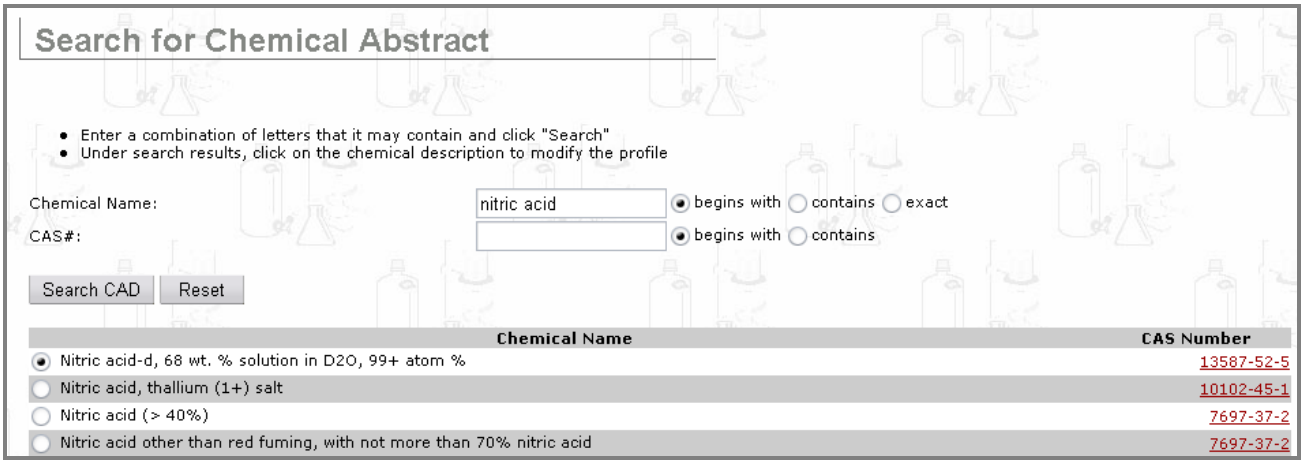
4. Click Search CAD.

If your chemical has no CAD listing, the following message will appear at the top of page [IM573].

1. Use your browser's back button to return to page [IM572]:

2. Return to **Create a New Chemical Abstract in CAD** of this manual for help in completing the empty fields in the Chemical Abstract page [IM572].

If your chemical has a CAD listing, a list of chemical names and CAD numbers will be generated at the bottom of your screen:



1. Click on the CAS# to view the Chemical Abstract and MSDS Details for the chemical on page [IM575]. You can return to page [IM573] by clicking on your browser's back button.

2. If the Chemical Name and the CAS Number describe your chemical, click a radio button ◉ next to the appropriate chemical name in order to select that chemical.

3. Click Select a CAD to accept your selection.

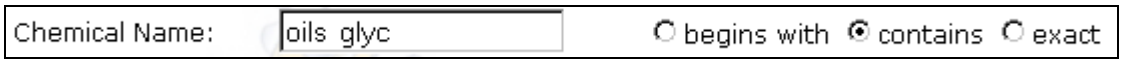
4. You will now be transferred back to page [IM572]: Chemical Abstract

5. Certain fields on page [IM572] (for example Chemical Full Name:, CAS Number:, and Chemical Formula:) will now be filled in.

6. Return to **Create a New Chemical Abstract in CAD** of this manual to complete the remainder of the empty fields on the Chemical Abstract page [IM572].

An Additional Feature of CAD Searches

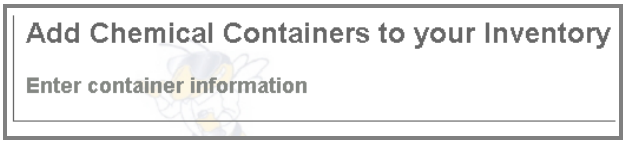
There is an additional feature for looking up chemical container information by Searching CAD. Many chemical names are very long. To generate a complete list of chemical names in CAD that begin and end with certain characters, place a whitespace between the beginning and ending characters. Whitespaces are generated by using the space bar. This option works when you click either ○ begins with or ○ contains. This option does not work if ○ exact is clicked. For example:



Click Search CAD to accept the transaction. A complete list of chemical names in CAD that have the characters "before" the whitespace and "after" the whitespace will be generated, for example:

Chemical Name	CAS Number
Fats and Glyceridic **oils**, vegetable-oil, **gly**ceride and tocopherol fraction	72869-74-0
Fats and Glyceridic **oils**, menhaden, polymd., polymers with **gly**cerol, phthalic anhydride, rosin, soybean oil and tall oil	96471-09-9
Fats and Glyceridic **oils**, oiticica, polymers with bisphenol A, bisphenol A di**gly**cidyl ether, p-tert-butylphenol, cyclohexanone, formaldehyde and tung oil	144713-08-6
Mixed vegetable **oils**, poly**gly**cerol esters	68953-55-9

To add a chemical in this generated list to your inventory, click the chemical name for that chemical. You will now be transferred to the page for adding container information [IM536]:



Click the CAS Number in the generated list to view **Chemical Abstract and MSDS Details**.

Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

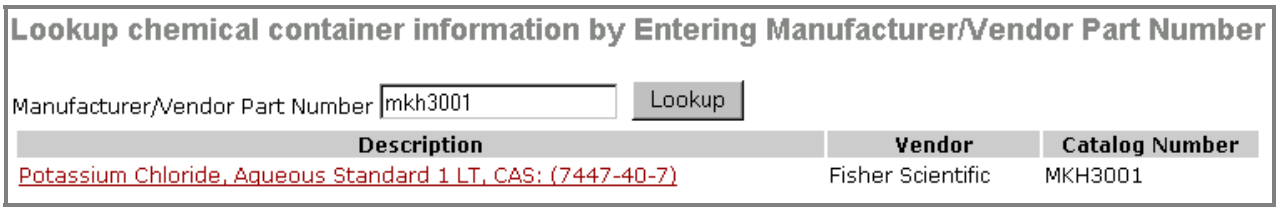
Choice 3: Entering Manufacturer/Vendor Part Number

This choice is only available if the vendor catalogues have been uploaded into CHEMATIX™. If this function is unavailable, please contact your CHEMATIX™ System Administrator.

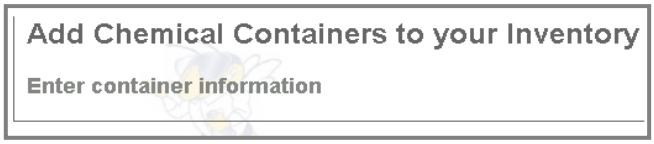
1. Enter the manufacturer's or the vendor's part number into the following field (in this example, MKH3001):

2. Click Lookup.

3. If the manufacturer's or vendor's part number is associated with a record in the Chemical Abstract Database (CAD), a Description, Vendor, and Catalog Number will appear below the Lookup button, for example:



4. Click the name of the chemical to add this chemical to your inventory (in this example, Potassium Chloride, Aqueous Standard 1 LT, CAS: (7447-40-7)). You will now be transferred to the page for adding container information to your inventory [IM536]:



5. Proceed to **Step 2: Enter Container Information** section of this manual on page 29.

Choice 4: Entering Container Barcode

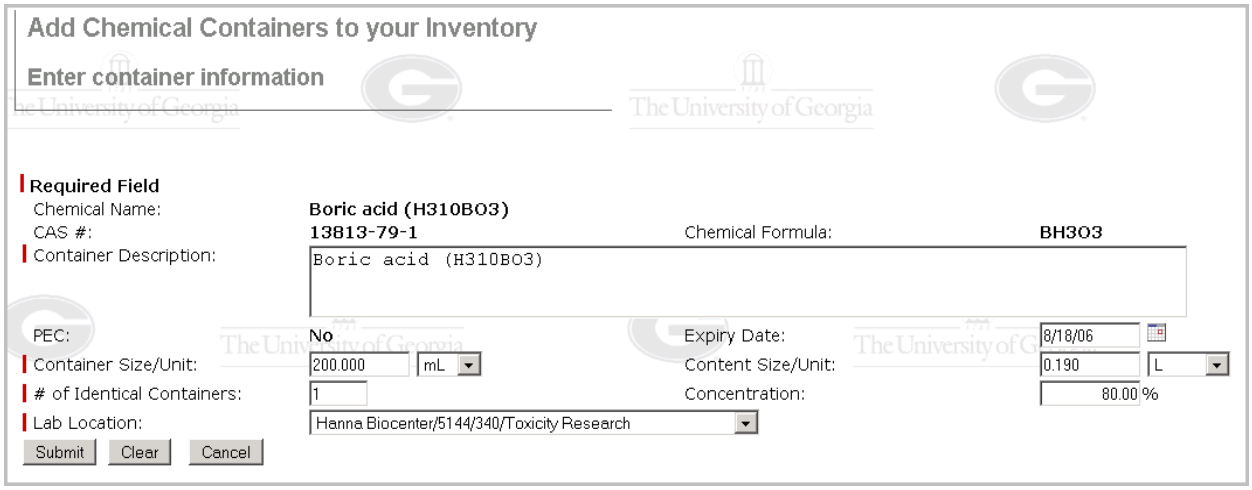
This option is to be used when you have an existing container barcode to be entered into your inventory.

1. Enter the container's barcode in the container barcode field. For example:

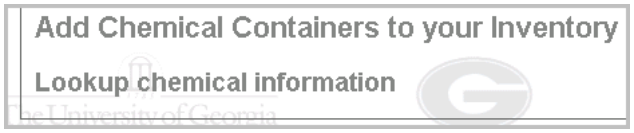
2. Click Lookup.

3. If the barcode is invalid, the following message will appear at the top of the screen: *Unknown container barcode.*

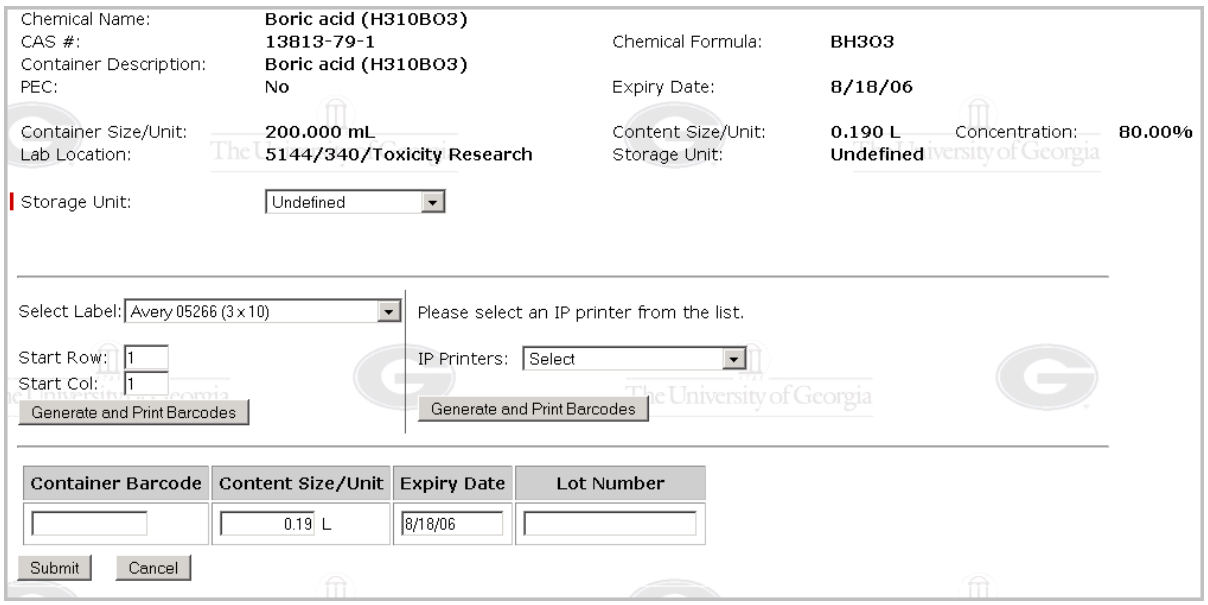
4. If the barcode is valid, you will be directed to the Add Chemicals to Your Inventory page [IM536] which displays current container information such as container description, content size/unit, container size/unit, lab location, expiry date, etc. For example:



5. Click Cancel to cancel the registration of this item to your inventory. You will now be transferred to the page for looking up chemical information [IM535]:

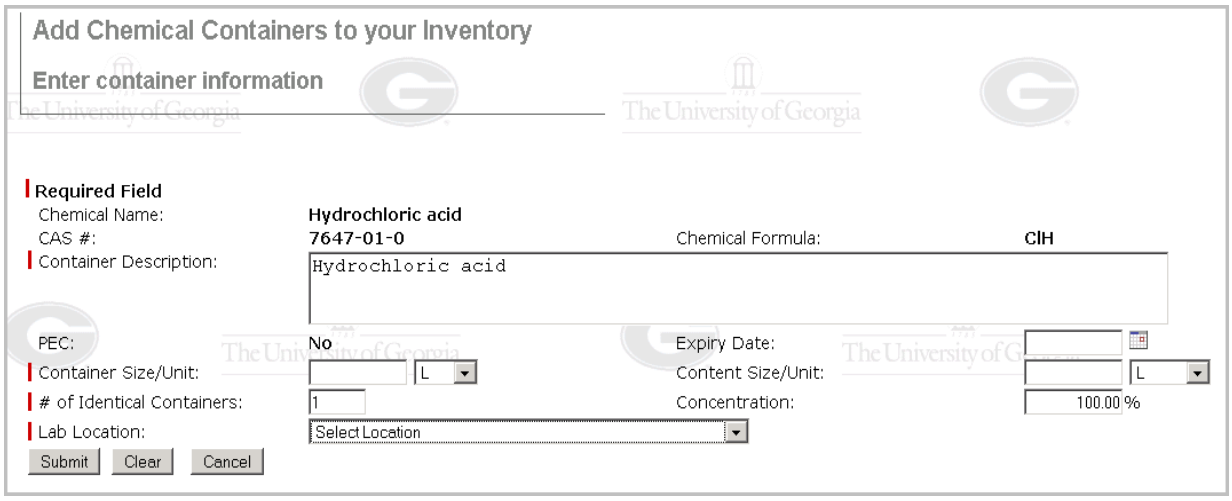


6. Ensure all information listed is accurate. Make the changes necessary by entering in the correct data. If the container information is correct click Submit and the following screen will appear to generate and print barcodes:



7. Proceed to Step 3: Enter, Generate, and Print Barcode Labels [IM537] on page 31.

Step 2: Enter Container Information to your Inventory [IM536]



The chemical information has already been entered into the above form on page [IM536]

You will now enter the container information for this chemical.

1. PEC: **PEC** is a chemical that can become a Potentially Explosive Chemical through aging. This is defined by your institution's Department of Environmental Health & Safety.
   a. **NO** indicates that this chemical is not a PEC.
   b. **YES** indicates that this chemical is a PEC. If YES, you must enter an Expiry Date: for this chemical.

2. Enter the Expiry Date:. This is the expiration date of a chemical as listed on the label of a chemical container.

   To select the Expiry Date, click the pop-up calendar next to the Expiry Date: field to select the expiry date OR enter the numerical date MM/DD/YYYY into the expiry date field.

   The Expiry Date: is only enforced for PEC's. However, this is still useful information for non-PEC's because the Expiry Date: will be shown on the Inventory Report.

3. Enter the Container Size/Unit:.

   The Container Size: field refers to the actual size of the container, not to how much chemical is held within the container.

   The Container Unit: field refers to the unit used to quantify container size.

4. Enter the Content Size/Unit:.

   The Content Size: field refers to the actual amount of chemical held "inside" the container.

   The Content Unit: field refers to the unit used to quantify content size.

   The Content Size/Unit: fields are especially useful for adding containers. For example, if a container has been opened and some of the contents used, the actual content of the chemical

in the container is put into the Content Size/Unit: fields. For example, the Container Size/ may be 2 liters, but the actual content in the container, at inventory time, may be only 0.5 liters. In this case, the Content Size/ is 0.5 liters.

NOTE:

a. If a container is new, the Container Size/Unit: and the Content Size/Unit: will be the same.

b. If the Content Size/Unit: fields are empty, it is assumed that the Content Size/Unit: quantities are the same as the Container Size/Unit: quantities.

c. Enter the Concentration: or leave at 100.00%. Concentration refers to the concentration of the chemical in the container.

d. Select the Lab Location: where the chemical is going to be stored from the pull-down menu. You must allow the page to refresh after selecting the lab location.

e. The Lab Location: pull-down menu will display all lab locations associated with the user who is adding the chemical to his or her inventory.

f. Enter the # of Identical containers: to be entered into your inventory (for example, from one box, carton, flat, shipment, etc.).

g. To finish, you have three choices:

Choice 1: Submit

i. Click Submit to accept and submit the above information.

NOTE: The computer will inform you if you have missed a required field. If you have missed a required field, the screen will scroll up to the top of the page. There will be a notification written in red saying, which fields need to be filled in. Fill in the necessary fields, and click Submit again.

You will now be transferred to the page for entering, generating, and printing barcode labels [IM537]:

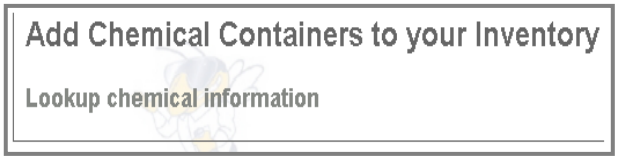
ii. Proceed to Step 3: Enter, Generate, and Print Barcode Labels section of this manual on page 31.

Choice 2: Clear

i. Click Clear to clear the input fields on this page. You can now re-enter the container information for this chemical.

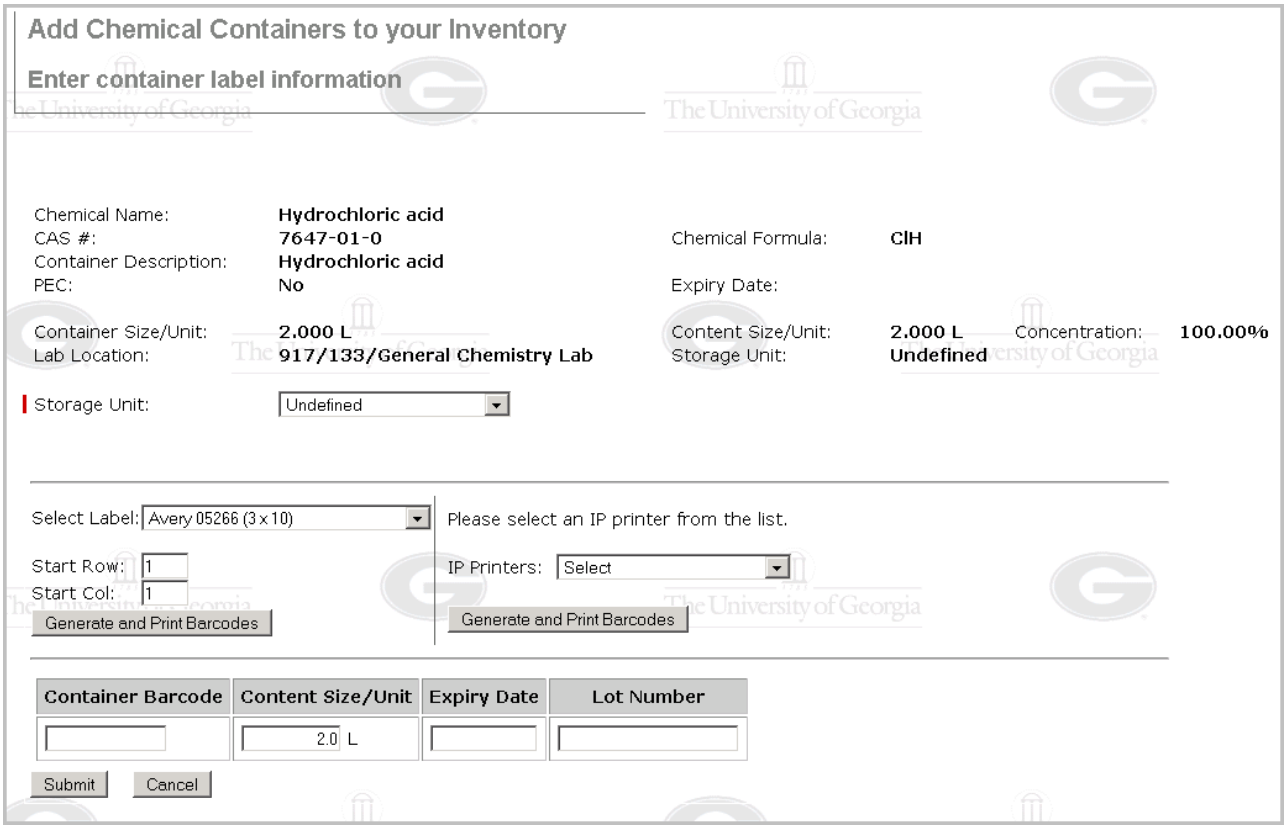
Choice 3: Cancel

i. Click Cancel to cancel the registration of this item to your inventory. You will now be transferred to the page for looking up chemical information [IM535]:



ii. Return to Step 1: Look up and Enter Chemical Information section of this manual on page 9.

Step 3: Enter, Generate, and Print Barcode Labels [IM537]



All the chemical and container information has been entered into the above form except for the Storage Unit:

1. Select the Storage Unit: from the pull-down menu.

2. The Storage Unit: is the "actual physical location" of the chemical in the Lab Location:. There may be multiple storage units in a lab location. Examples can include cabinets, refrigerators, shelves, bench tops, etc.

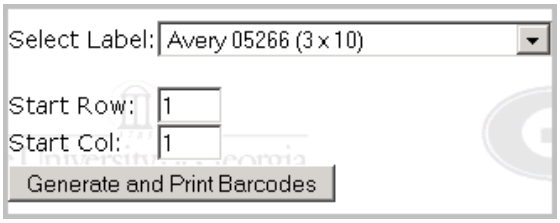
3. Use Undefined to indicate that the chemical is located in an undefined location "somewhere" in the Lab Location:

You will now enter, generate, and/or print the inventory barcode labels that will be affixed to the chemical containers. You have three options:

Option 1: Using Avery Label 05266 (3 X 10) or equivalent
Option 2: Using an IP printer
Option 3: Using pre-generated labels

Option 1: Using Avery Label 05266 (3 X 10) or equivalent

This option is for generating and printing barcode labels onto a blank label sheet such as Avery Label 05266 or equivalent.



To use this option, scroll down to the following:

1. Enter the Start Row: and the Start Col: (Col = column) where you want the printer to start printing.

   This option is available because not all labels on any one sheet will be used up. This option tells the printer where to start printing the labels. Look on your label sheet and enter where you want the printer to start printing.

2. Click Generate and Print Barcodes.

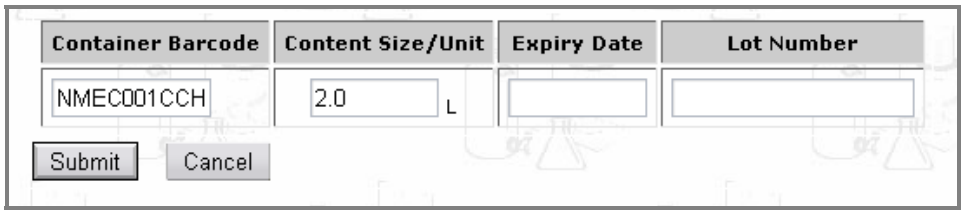
3. The computer will now generate the barcodes automatically.

4. After a few seconds, the Barcodes PDF window [IM211] will pop up:

5. The barcode(s) have now been generated.

6. Proceed to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

7. After printing the barcode(s), scroll down to the bottom of the page [IM537], as in the following example:



   Click Submit to accept and submit this transaction.

8. The following popup window will appear:

9. Apply the label(s) to the correct chemical container(s).

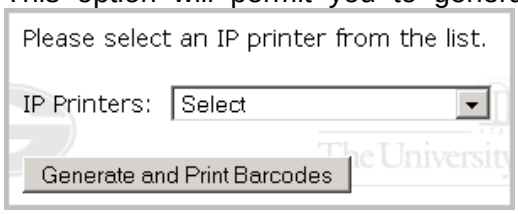
10. Click OK in the popup window.

11. The following text will now appear at the top of page [IM537]:

You have successfully added chemical container(s) to your inventory.

Option 2: *Using an IP printer*

This option will permit you to generate and print barcodes using an IP printer or equivalent:

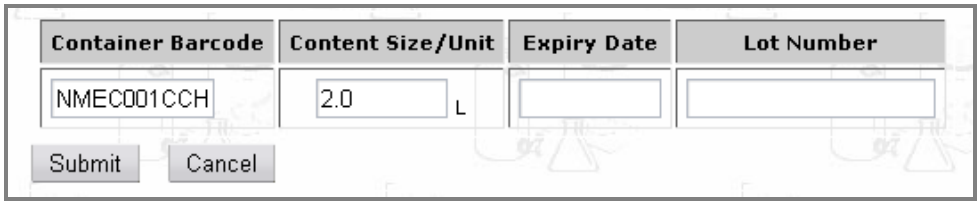


1. Click on the pull down menu to select the appropriate IP printer.
2. Click

3. If the barcodes have been printed, the system will return a confirmation message at the top of page [IM537]:

4. After printing the barcode(s), click

at the bottom of page [IM537] to accept and submit this transaction to CHEMATIX™, for example:



5. The following reminder popup window will appear:
6. Apply the label(s) to the correct chemical container(s).
7. Click

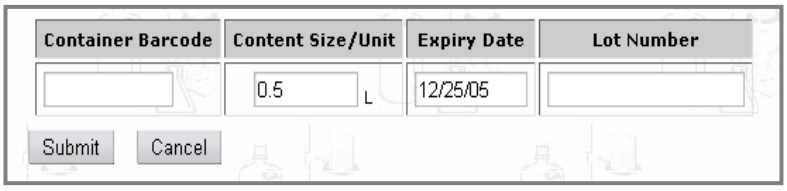
in the popup window.

You have successfully added chemical container(s) to your inventory.

Option 3: Using pre-generated labels

This option is available for assigning a pre-generated barcode label to a chemical container.

To use this option, scroll down to the bottom of page [IM537]:



1. Enter the **Container Barcode** from a pre-generated label. You may also enter or change the **Content Size/Unit**, **Expiry Date**, and **Lot Number**. If there is a **Lot Number**, enter it (optional).

2. Click Cancel to abort this transaction. You will be transferred back to page [IM536]:

   Return to **Step 2: Enter Container Information** section of this manual on page 30.

3. Click Submit to accept and submit this transaction.

   If there are errors in the information submitted, an error message will appear at the top of the screen. Correct the incorrectly inputted data, and click Submit again.

   If there are no errors in the information submitted, the following reminder window will appear on the screen:

4. Apply the pre-generated barcode(s) to the correct chemical container(s).

5. Click OK.

6. You will now be transferred back to page [IM535]:

7. You can now begin to add additional containers to your inventory.

8. Return to **Step 1: Look up and Enter Chemical Information** section of this manual on page 9 and follow the steps in this procedure to continue.

Upload Initial Inventory Files

This procedure is for uploading initial inventory into a lab for the first time. This permits many containers to be entered into one lab location simultaneously.

This procedure is explained in detail in the **Resources Management Module User Manual**. Please refer to the following sections of the **Resources Management Module User Manual** for more information:

Option 3. Upload Initial Inventory Files
1. Enter Chemical Containers – Individually
2. Upload Initial Inventory Files – in quantity
    - Step 1. Preparing a .csv File
    - Step 2. Creating your Lab(s)
    - Step 3. Creating your Storage Units
    - Step 4. Uploading your .csv Files
    - Step 5. Verifying that your .csv File has been Uploaded

Distribute Chemical to Multiple Containers

This function is used to distribute a chemical from one container into another container or into multiple containers.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

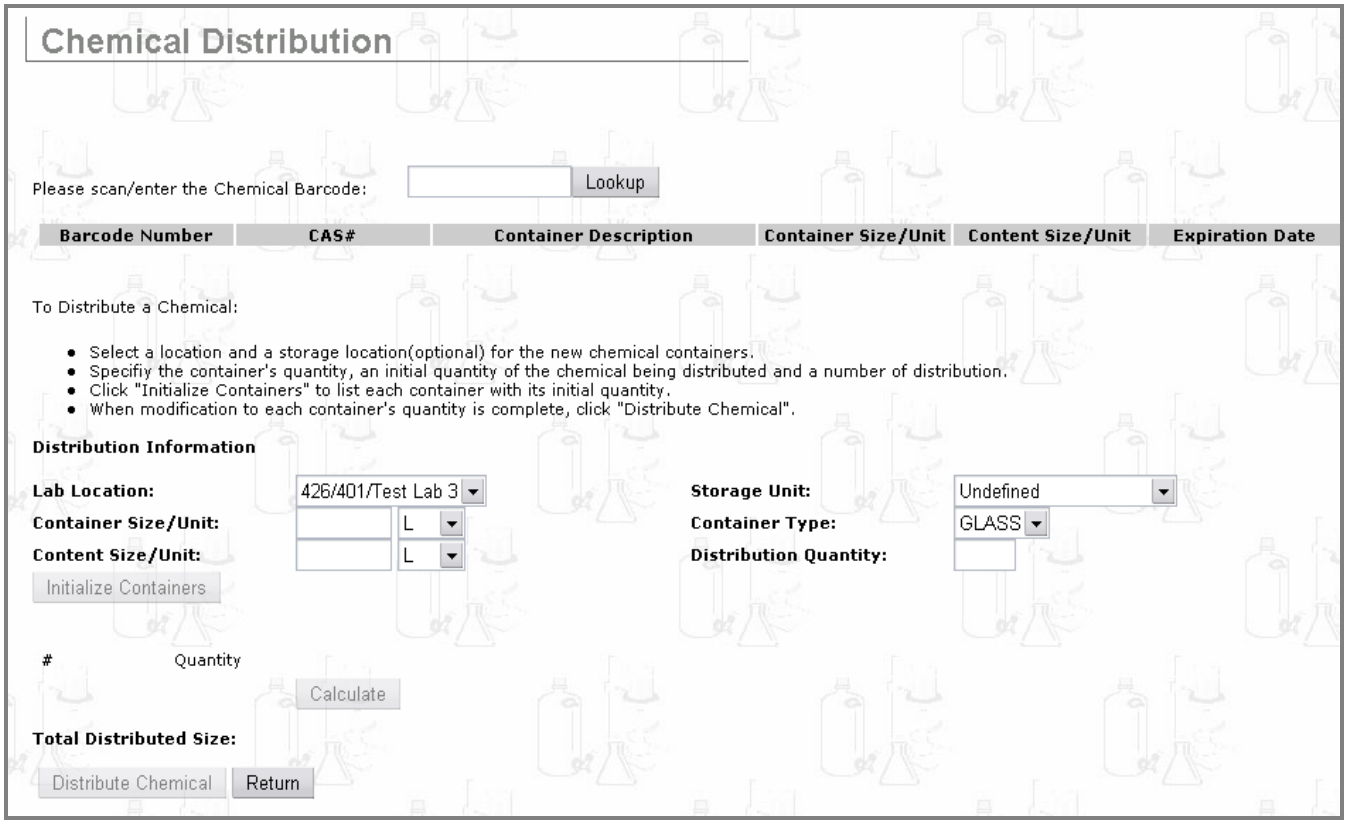
2. You will now see the opening page for Inventory Management [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

Add Items to Inventory
Add Chemical Container(s) to Your Inventory
Distribute Chemical to Multiple Containers
Create a Chemical Mixture Container
Adjust Container Quantity

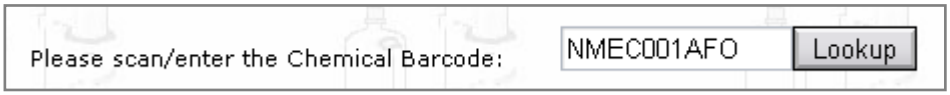
4. Click the Distribute Chemical to Multiple Containers link to distribute a chemical to multiple containers.

5. You will now be transferred to page [IM564]:

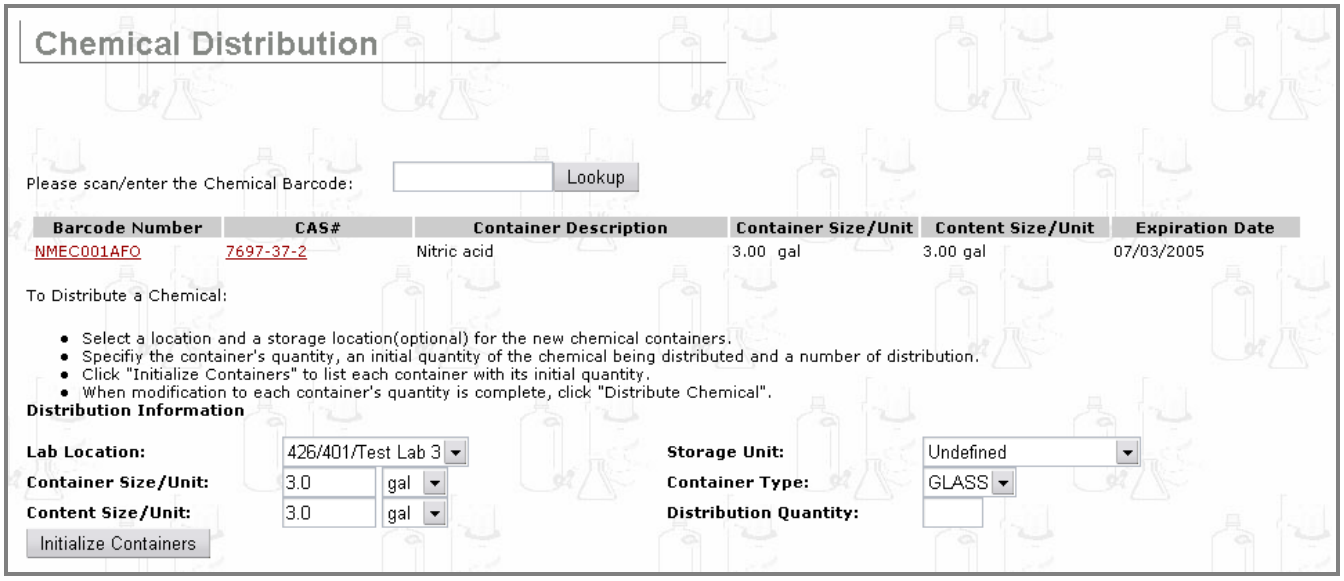


6. Enter or scan the source chemical container's barcode into the following field:

7. Click Lookup.



8. The inventory description for barcode NMEC001AFO will now appear:



Note the following inventory information for the source chemical:

Barcode Number	NMEC001AFO
CAS#	7697-37-2
Container Description	Nitric acid
Container Size/Unit	3.00 gal
Content Size/Unit	3.00 gal
Expiration Date	07/03/2005

Note the following start fields for the target containers and chemicals:

Lab Location:	426/401/Test Lab 3
Storage Unit:	Undefined
Container Size/Unit:	3.0 gal
Container Type:	glass
Content Size/Unit:	3.0 gal
Distribution Quantity:	

9. To distribute this chemical, select the target **Lab Location:** and **Storage Unit:** for the new chemical container(s):

10. Select the target **Container Size/Unit:** into which the chemical is going to be distributed (in this example, 1 gal).

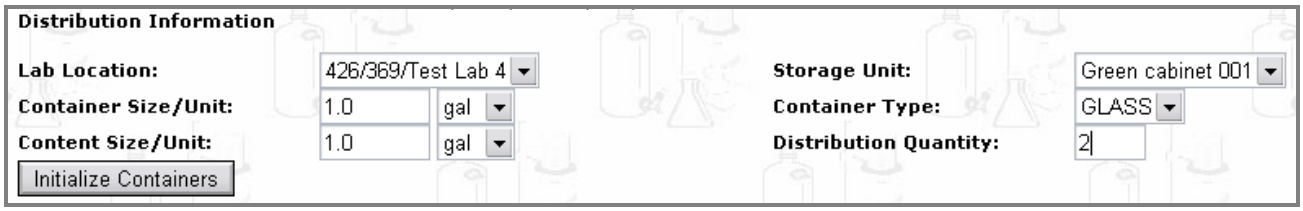
11. Select the target **Content Size/Unit:** (in this example, 1 gal).

12. Select the target **Container Type:** from the pull-down menu (in this example, glass).

13. Select the **Distribution Quantity:** (in this example, 2).

    Distribution Quantity: is the number of identical target containers into which the chemical from the source container is going to be distributed.

    The screen will now look like this:



EXPLANATION:
In this example, our source chemical container holds 3 gallons of chemical. We are going to distribute 2 gallons of this source chemical into two identical 1 gallon containers. This means that each target 1 gallon container will hold 1 gallon of chemical. These two target 1 gallon containers will be stored in the ***Green Cabinet 001*** in the ***426/369/Test Lab 4***.

14. Check the information on the screen.

15. If this information is correct, click Initialize Containers.

16. Click Calculate.

    Click Return to return to the main Inventory Management page [IM400] without distributing any chemicals and without making any changes to your inventory.

17. Click Distribute Chemical, if the distribution information on the screen is correct.

18. If the chemical has been successfully distributed for inventory purposes, the message ***Distribution record saved successfully.*** will appear at the top of your screen.

19. The barcodes for the new containers will now be generated and printed.

20. After a few seconds, the Barcodes PDF window [IM211] will pop up:

21. The barcode(s) have now been generated.

22. Go on to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

23. Once the barcodes have been printed, distribute the source chemical into the target chemical container(s).

24. Apply the printed barcode labels to the correct chemical container(s).

25. Place the containers in their proper inventory storage unit location.

26. You can now begin again to distribute additional source chemicals into their target containers.

Alternately, you can click the menu bar at the top of the CHEMATIX™ screen for more options:

Eliminating an Empty Container from Your Inventory

If you have distributed all of the contents of a container into new containers or used up the contents of a container for experiments, you may wish to eliminate the original container from your inventory. However for future tracking purposes, CHEMATIX™ will retain all information on the original container. Chemical container information is never deleted from CHEMATIX™, even though a container may be removed from your inventory. Such "removed" containers are considered by CHEMATIX™ to be "inactive".

For example, you have a chemical container with the barcode number NMEC001ATR. The amount of chemical in this container is 1.0 liter. After you distribute the chemical into two new 0.5-liter containers, the content size in the original chemical container will be zero. At this point, you may wish to eliminate the container with the barcode number NMEC001ATR from your inventory. If this is the case, eliminate this container from your inventory and dispose of the container according to the guidelines of your institution's Department of Environmental Health & Safety.

1. To eliminate a container from your inventory, click the Inventory button on the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

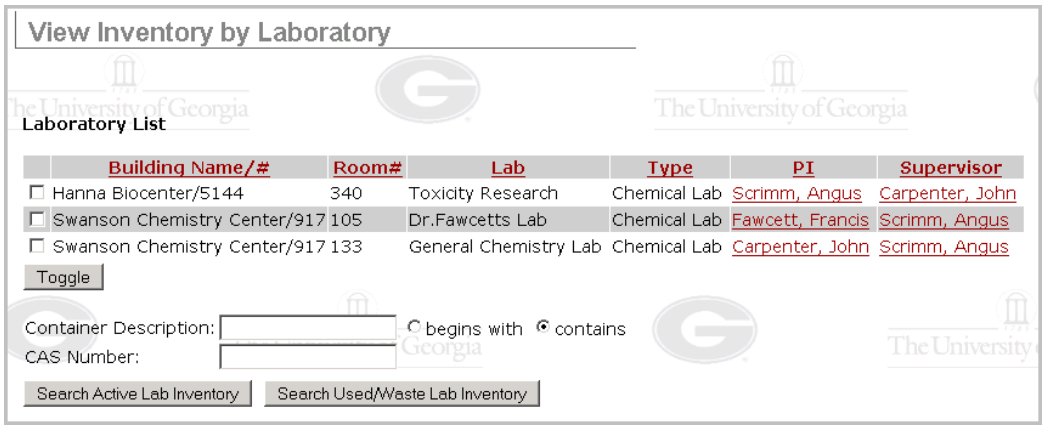
Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

4. Click the link View My Inventory Report.

5. You will now be transferred to the **View Inventory by Laboratory** page [IM635]:

6. The following screen will appear providing two choices to search for inventory:

   a. View inventory by building.
   b. View inventory by container description or CAS number within a building.


View Inventory by Laboratory
Laboratory List
Building Name/# Room# Lab Type PI Supervisor
Hanna Biocenter/5144 340 Toxicity Research Chemical Lab Scrimm, Angus Carpenter, John
Swanson Chemistry Center/917 105 Dr.Fawcetts Lab Chemical Lab Fawcett, Francis Scrimm, Angus
Swanson Chemistry Center/917 133 General Chemistry Lab Chemical Lab Carpenter, John Scrimm, Angus
Toggle
Container Description:
begins with
contains
CAS Number:
Search Active Lab Inventory
Search Used/Waste Lab Inventory

7. To view inventory in a specific building select the appropriate building by clicking on the check box ☑ beside the building name or click Toggle to select all buildings.

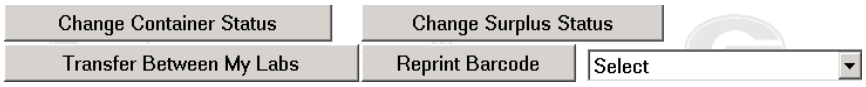
8. To view the inventory of a specific chemical you can enter either the Chemical Name: or the CAS#:.

9. Click Search Active Lab Inventory to view inventory in the active laboratories or click Search Used/Waste Lab Inventory to view inventory

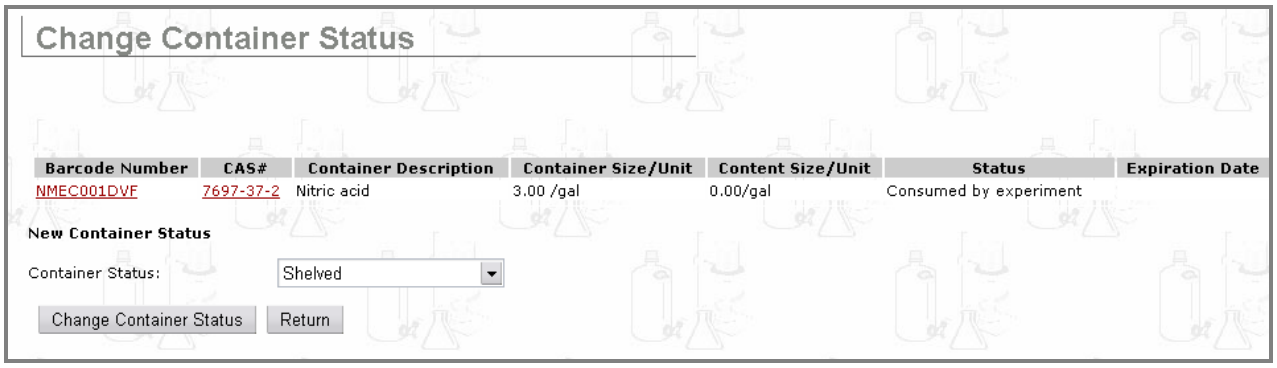
10. You can now check the status of any container that you wish to eliminate from your inventory. This can be done straight from the Inventory Report or by clicking on the container barcode. This step will help you to ensure that you are eliminating the correct container from your inventory.

11. Click the check box(es) ☑ for the chemical container(s), which you wish to eliminate from your inventory.

12. Scroll down to the bottom of the page until you reach the following menu bar:



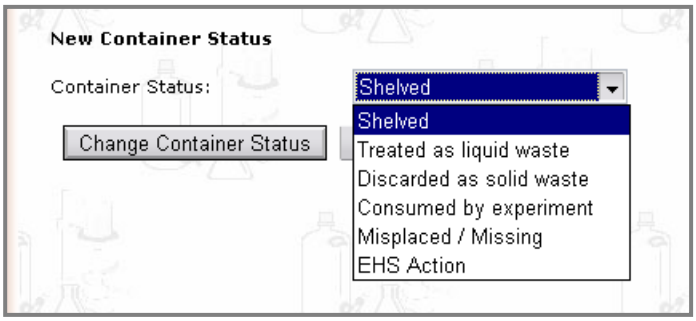
13. Click Change Container Status. You will now be transferred to page [IM576]. For example, the following information will appear:



NOTE:
In this example, the **Container Size/Unit** is 3.00/gal. This is the actual size of the container. The **Content Size/Unit** is 0.00 gal. This means that the container is empty.

14. Open the pull-down menu for Container Status:.

15. The following drop down list will now appear. (The status options displayed on this list are for example purposes only. These options are set and maintained on an institutional basis, so those available may differ from the example. For more information, please contact your CHEMATIX™ System Administrator):



16. Click the correct option from the list provided to eliminate a container from your inventory, for example: ***Treated as liquid waste***, ***Discarded as solid waste***, or ***Consumed by experiment***. Not all of these options will remove a container from your inventory. Please follow the **Container Status** procedures for your institution. These procedures are available from your institution's Department of Environmental Health & Safety.

17. Click

.

18. You will now be transferred to page [IM554].

19. If this transaction has been successful, the following text will appear at the top of your screen:

20. If you have noted the barcode number of the "removed" container, you can check from your inventory report on this page [IM554] to make sure that the container has been eliminated from your inventory.

Alternately, you can click

button at the top of the CHEMATIX™ screen:

Enter the barcode information into the following field, for example:

Click

.

If the barcode does not exist, the following message will be displayed at the top of the screen:

NOTE:
Even though you may have removed a container from your inventory, container information is never deleted from CHEMATIX™. CHEMATIX™ will retain all information on the original container and its contents. This is done for future tracking purposes.

Create a Chemical Mixture Container

This function is for creating a new chemical mixture container, which holds the contents from two or more containers. This function will help you to enter your new chemical mixture container into your inventory.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

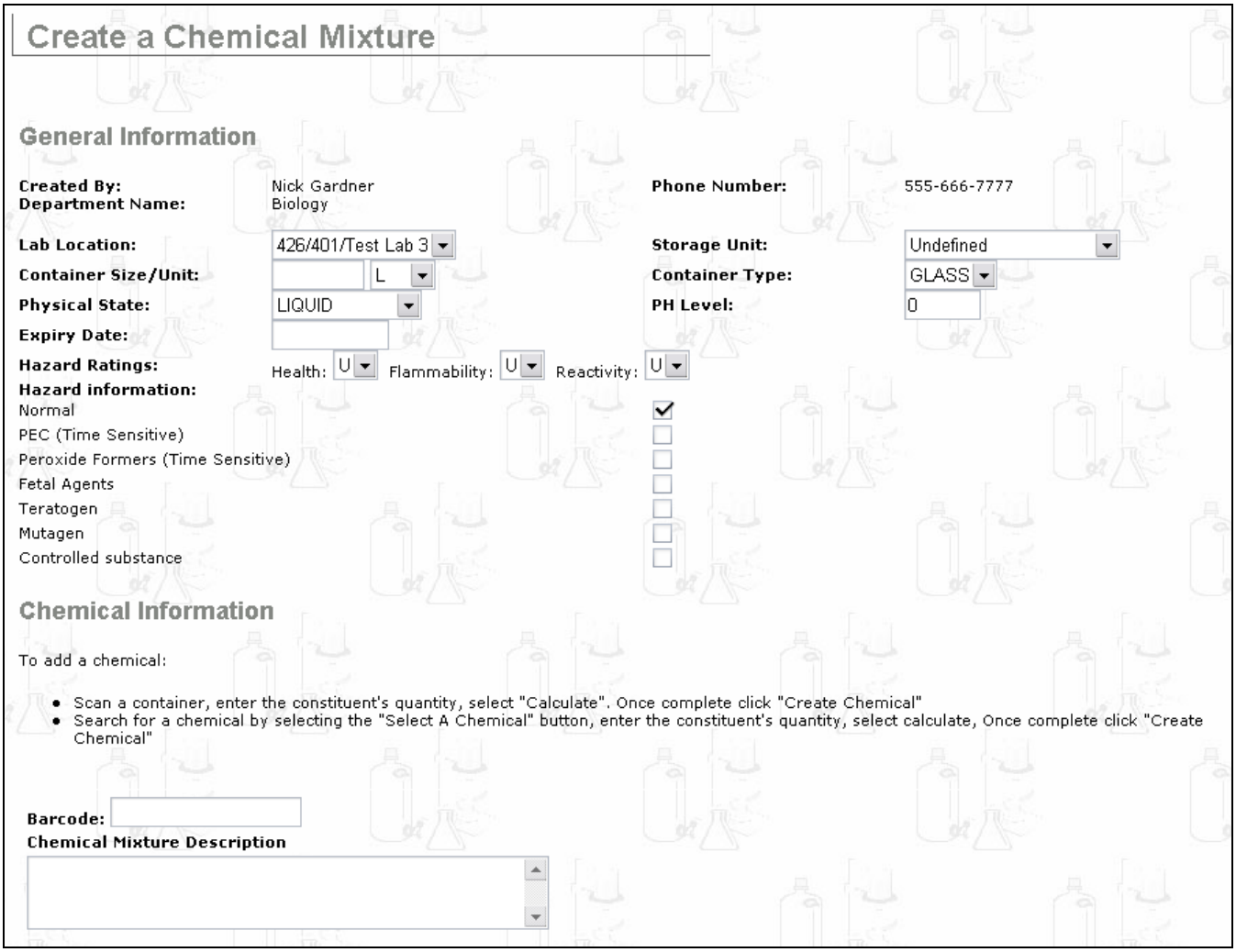
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

4. To create a chemical mixture container, click Create a Chemical Mixture Container .

5. You will now be transferred to page [IM580]:

Add Items to Inventory
Add Chemical Container(s) to Your Inventory
Distribute Chemical to Multiple Containers
Create a Chemical Mixture Container
Adjust Container Quantity


Create a Chemical Mixture
General Information
Created By: Nick Gardner
Department Name: Biology
Phone Number: 555-666-7777
Lab Location: 426/401/Test Lab 3
Storage Unit: Undefined
Container Size/Unit: L
Container Type: GLASS
Physical State: LIQUID
PH Level: 0
Expiry Date:
Hazard Ratings: Health: U Flammability: U Reactivity: U
Hazard information:
Normal
PEC (Time Sensitive)
Peroxide Formers (Time Sensitive)
Fetal Agents
Teratogen
Mutagen
Controlled substance
Chemical Information
To add a chemical:
Scan a container, enter the constituent's quantity, select "Calculate". Once complete click "Create Chemical"
Search for a chemical by selecting the "Select A Chemical" button, enter the constituent's quantity, select calculate, Once complete click "Create Chemical"
Barcode:
Chemical Mixture Description

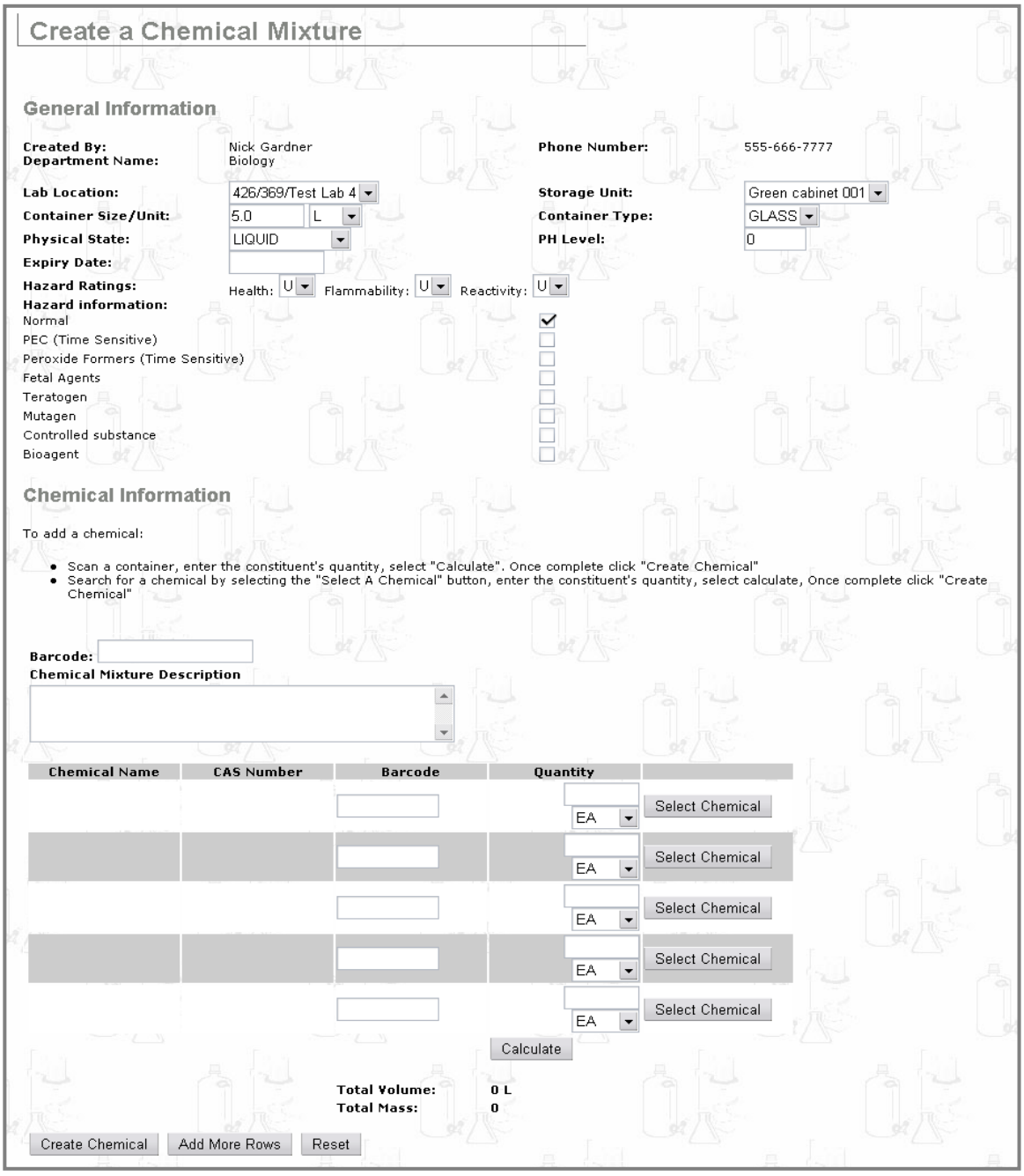
Step 1: Enter the chemical information for the target chemical mixture

1. Select the **Lab Location:** and **Storage Unit:** for the target chemical mixture.

2. Enter the **Container Size** and select the **Container Unit:** of the target container. Remember that the **Container Size** is the actual size of the container, not the liquid that is going to be transferred into it.

3. Select also ***Container Type***, ***Physical State***, ***pH Level***, ***Expiry Date*** (Use the format: MM/DD/YYYY), ***Hazard Ratings*** and ***Hazard Information***.

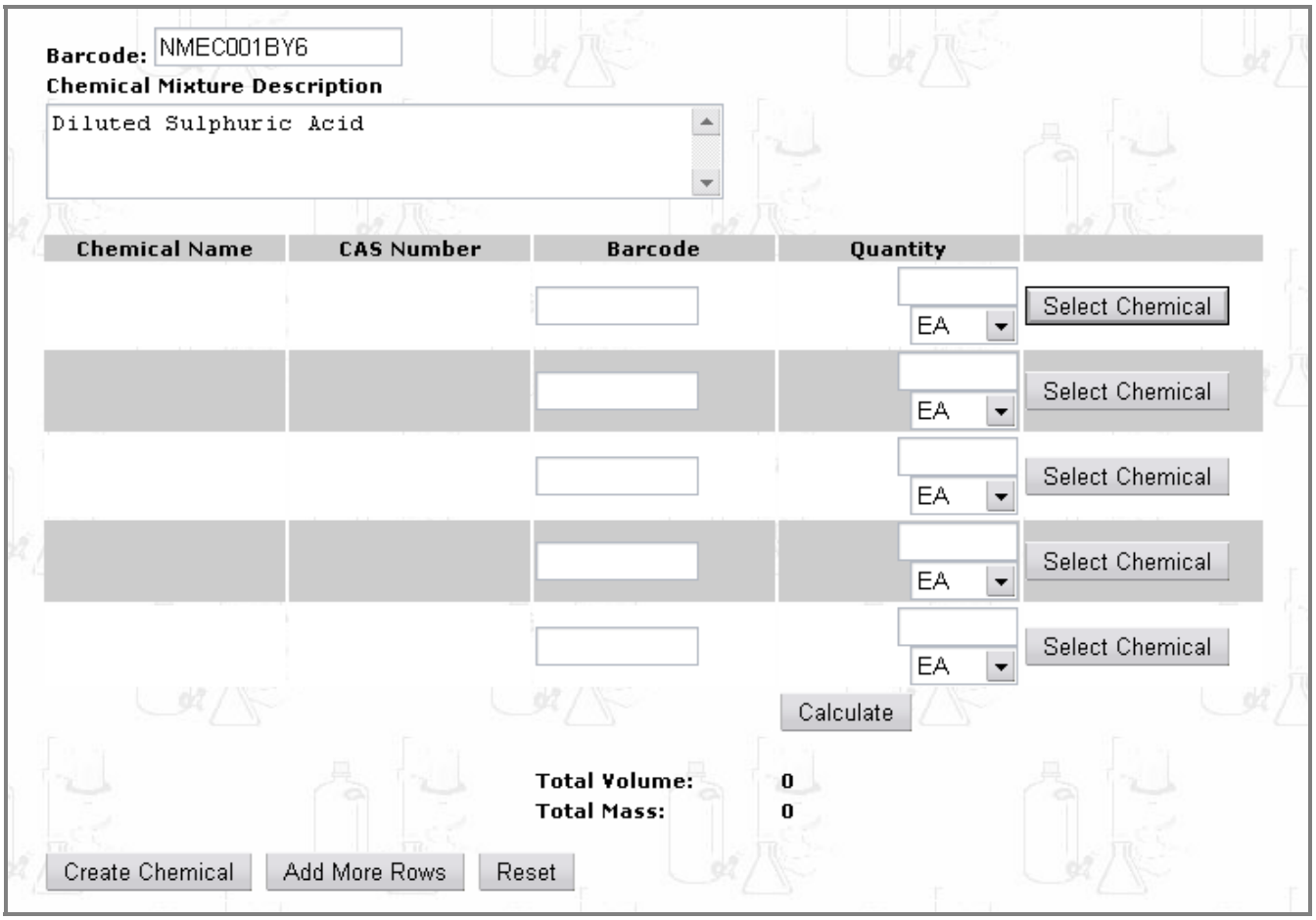
4. Your screen will now look like this example:



Step 2: Enter the chemical information for the target chemical mixture

1. Enter the barcode for the target container from a pre-generated list:

2. Enter the target Chemical Mixture Description or Name into the **Chemical Mixture Description** field:



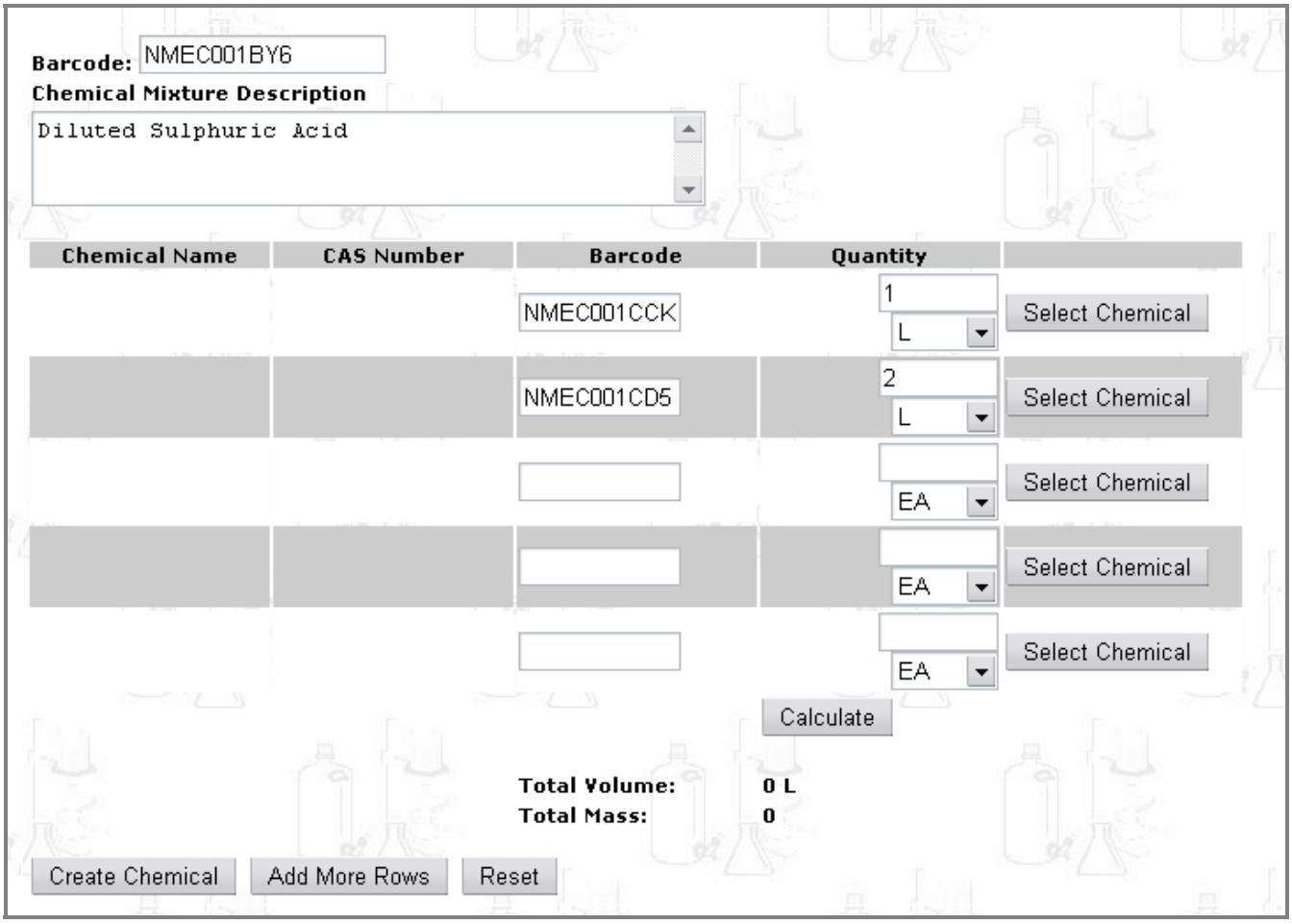
You now have two choices to enter source chemicals to the target chemical mixture:

[Choice 1: From chemicals in your inventory]

[Choice 2: From chemicals not in your inventory]

Choice 1: From chemicals in your inventory

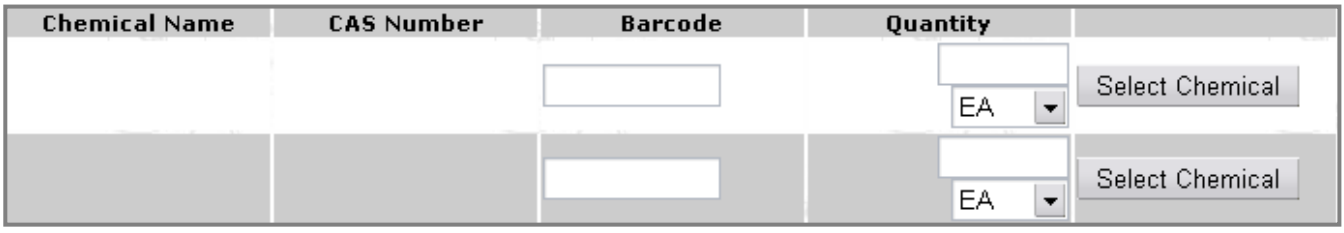
1. Enter the **Barcode**, **Quantity**, and Unit for each source chemical that you will add to the mixture. Your screen should now look like the following example:



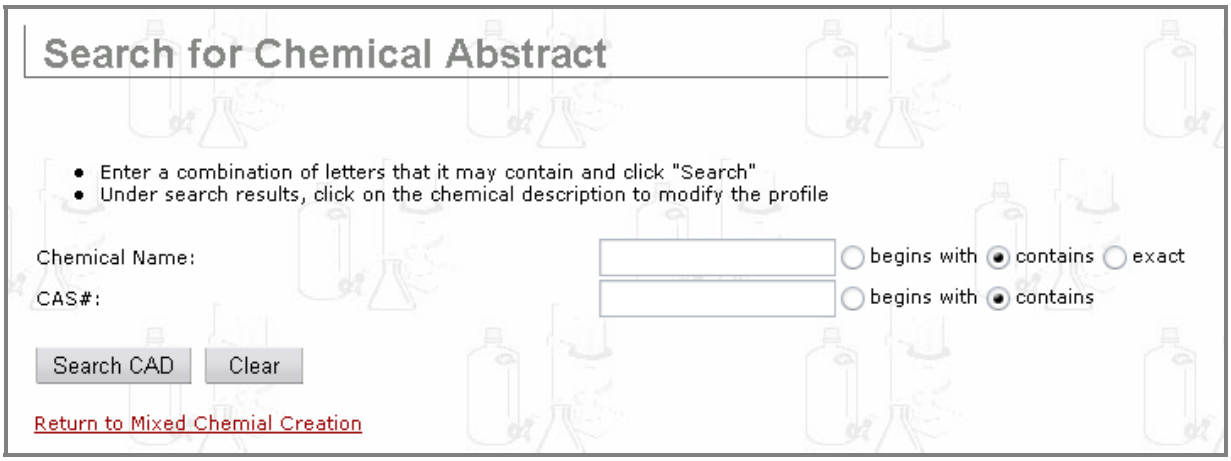
2. Proceed to **Step 10** in **Choice 2: From chemicals not in your inventory** on page 47.

Choice 2: From chemicals not in your inventory

1. If you have a chemical container that has not been entered into your inventory, and if you wish to add all or part of that container's contents to your mixture, click **Select Chemical**:

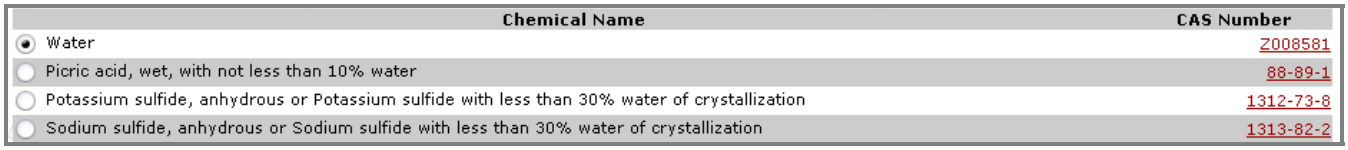


2. You will now be transferred to page [IM581]:



3. Enter either the Chemical Name: or the CAS#: and click Search CAD.

4. You will now be transferred to page [IM581], as in the following example:



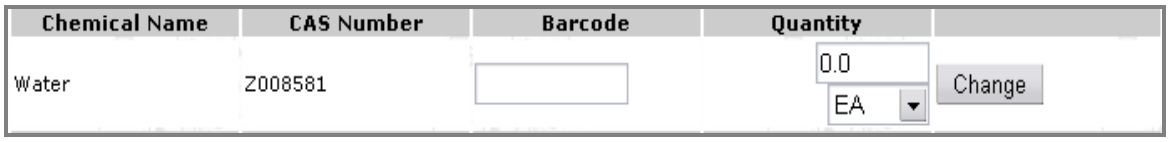
Chemical Name	CAS Number
Water	Z008581
Picric acid, wet, with not less than 10% water	88-89-1
Potassium sulfide, anhydrous or Potassium sulfide with less than 30% water of crystallization	1312-73-8
Sodium sulfide, anhydrous or Sodium sulfide with less than 30% water of crystallization	1313-82-2

5. Click on the radio button next to the chemical that you wish to add to your mixture (in this case, water).

6. Scroll down to the bottom of the page.

7. Click Select a CAD.

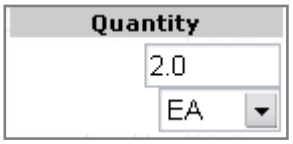
8. You will now be transferred back to page [IM580]:



Chemical Name	CAS Number	Barcode	Quantity	
Water	Z008581		0.0 EA	Change

Do not enter a barcode. Leave this field blank, as there is no barcode associated with this chemical.

9. Enter the quantity of source chemical that you want to add to the target mixture in the Quantity field:



10. Select the quantity unit from the drop-down menu.

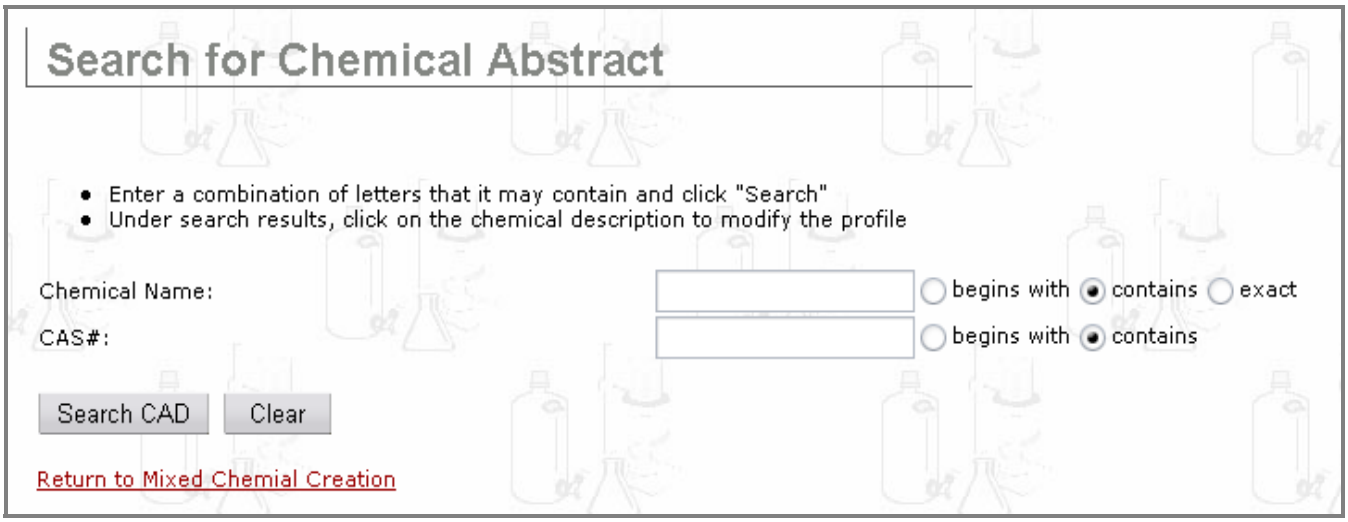
11. You can now add additional chemical(s) to your mixture.

12. To add more rows for entering additional chemicals, click Add More Rows at the bottom of the page.

13. Proceed to Step 3 (Making changes) or Step 4 (Creating your mixture).

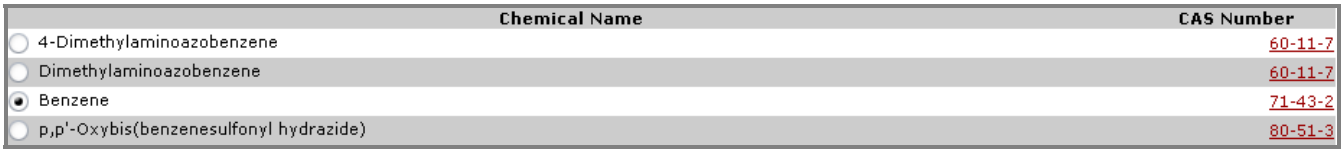
Step 3: Making changes to source chemicals in your target mixture

1. If you wish to change a chemical in this mixture, click [Change] at the end of that chemical's line. You will now be transferred to page [IM581]:



2. Enter either the [Chemical Name:] or the [CAS#:] and click [Search CAD].

3. You will now be transferred to page [IM581], for example:

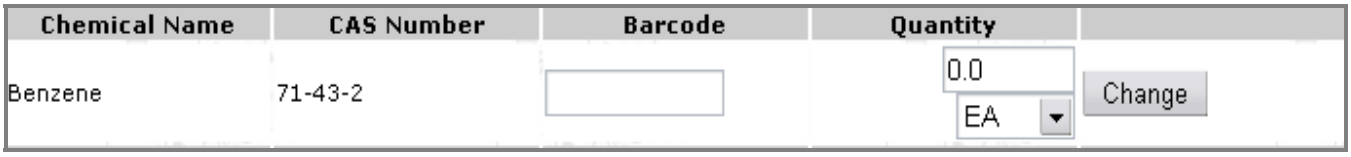


4. Click on the radio button [◉] for the chemical that you wish to select (in this case, Benzene).

5. Scroll down to the bottom of the page.

6. Click [Select a CAD].

7. You will now be transferred back to page [IM580], for example:



Do not enter a barcode. Leave this field blank, as there is no barcode associated with this chemical.

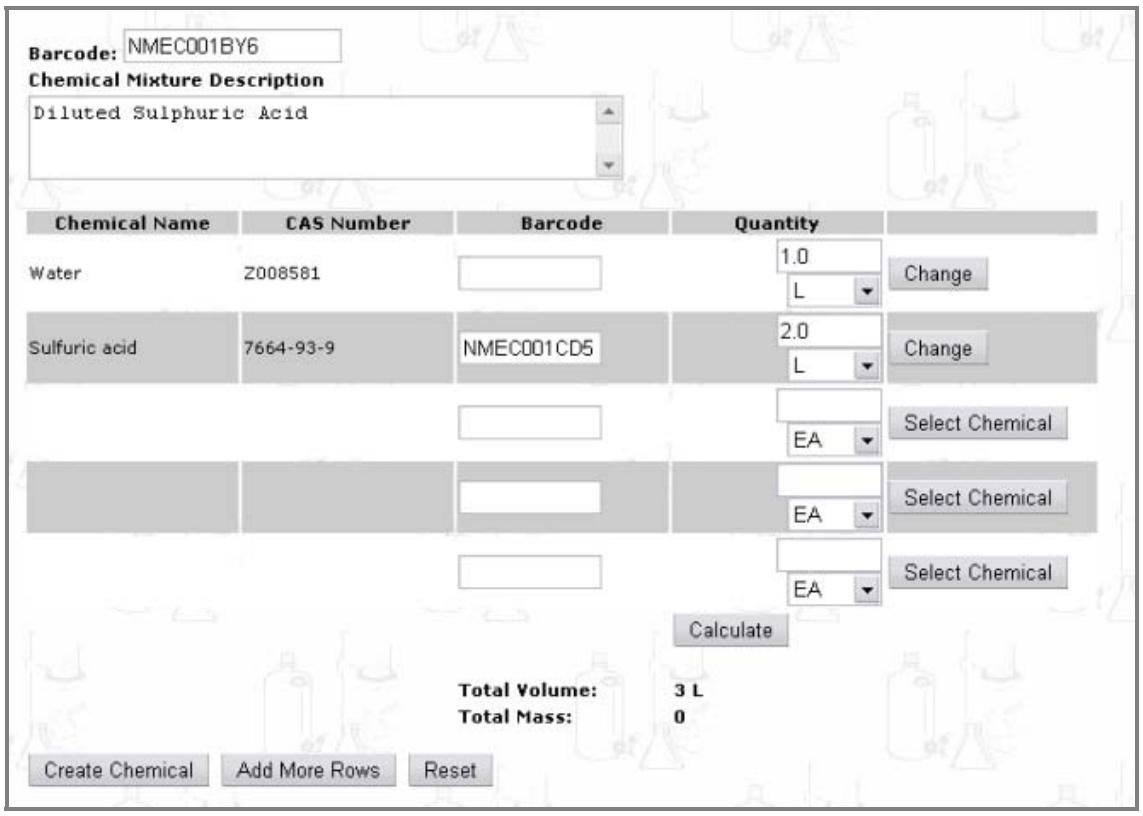
8. Enter the quantity in the [Quantity] field.

9. Select the unit from the drop-down menu.

Step 4: Creating your mixture

1. If you are finished adding to or changing source chemicals for your target mixture and if you are satisfied with your source chemicals, click Calculate.

2. Your screen will look like the following example:



3. Click Create Chemical at the bottom of your page to create a new chemical mixture in your inventory.

   Click Reset to clear this form and to start again with a blank form.

4. The text *The chemical mixture has been created successfully.* will now be displayed at the top of the page.

5. Your chemical mixture has been successfully created and entered into your inventory.

Adjust Container Quantity

This function is for tracking the amount of chemicals consumed or used up in experiment.

Most of the CHEMATIX™ users don't track container quantity. Container quantity tracking requires an adjustment every time when a chemical was used and quantity was taken out from each container. CHEMATIX™ has been designed to accommodate full quantity tracking; however most of the institutions took up the "full or empty" container approach. Such as: the container is treated a "full" until it is part of the inventory and when it becomes "empty" the entire container quantity is taken out from the inventory. In this approach the lab chemical inventories (and inventory summary reports) are calculated assuming that all containers are full.

Quantity tracking is a business decision that the institution makes during the implementation process. If a lab personnel wishes to maintain up to date quantity tracking, then the Adjust Container Quantity page will accommodate this requirement.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

4. Click the link Adjust Container Quantity .

5. You will now be transferred to the **Container Quantity Adjustment** page [IM656]:

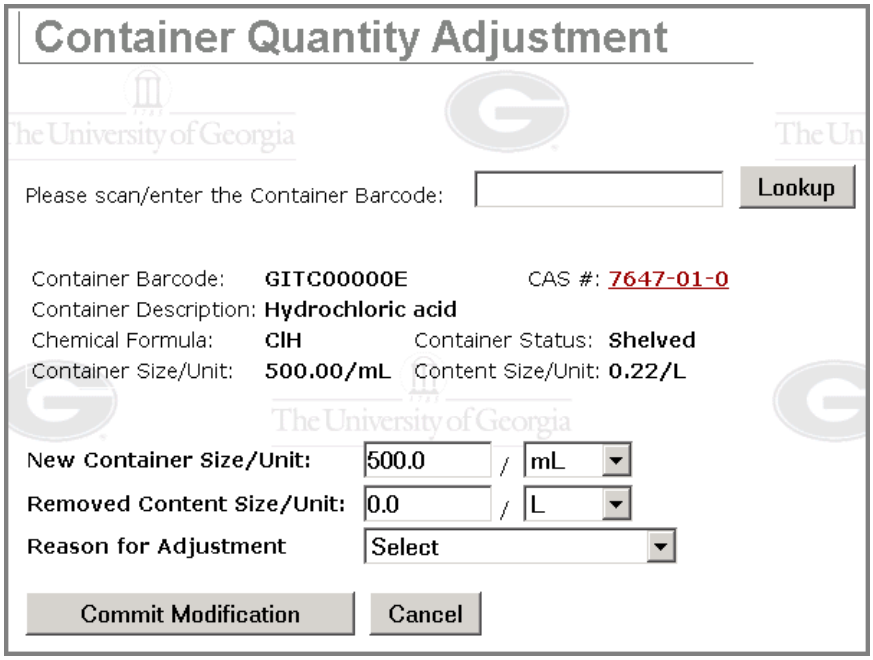
Add Items to Inventory
Add Chemical Container(s) to Your Inventory
Distribute Chemical to Multiple Containers
Create a Chemical Mixture Container
Adjust Container Quantity

6. Enter the barcode information into the following field, for example:

7. Click Lookup

8. If the barcode does not exist, the container barcode entry box will clear for a new entry.

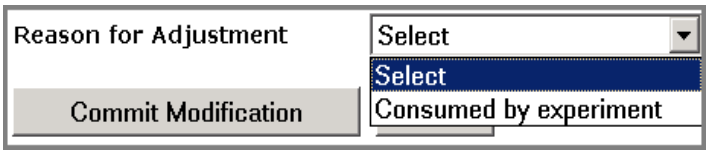
9. If the barcode is valid, the following screen will appear:



10. Enter in the Removed Content Size/Unit: and select the appropriate unit. Note that this is the quantity of chemical removed from the container.

11. Click on the pull down menu beside Reason for Adjustment and select the appropriate reason.

12. The following example displays consumed by experiment, however, the selection is based on each institution's preference based on business practices.



13. Click Commit Modification to update the change in quantity. If the container quantity change was successful the following message will appear:

14. Click Cancel if you do not wish to proceed with the change in quantity. You will then return to the Inventory Management page [IM140]:

Print Barcodes

This function is used to generate and print barcodes as well as to find and reprint existing barcodes.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text:

The two options to print barcodes are:

Option 1: Generate/Print Barcodes
To Generate/Print Barcodes on blank labels, click this link.

You will now be transferred to the page for generating chemical and location barcodes [IM188]:

Proceed to **Option 1: Generate / Print Barcodes** section in this manual.

Option 2: Find and Reprint Existing Barcodes
To Find and Reprint Existing Barcodes, click this link.

You will now be transferred to the page for finding and reprinting existing barcodes [IM232]. This option is useful for replacing damaged, missing, or unreadable barcodes.

Proceed to **Option 2: Find and Reprint Existing Barcodes** section 78 in this manual.

Option 1: Generate/Print Barcodes

This function is used to generate and print barcodes, which can then be applied to chemical containers.

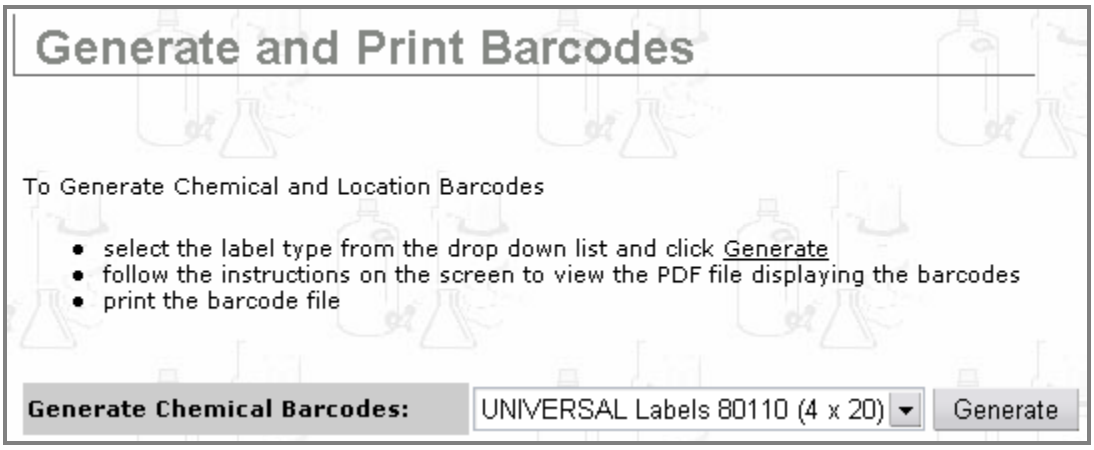
1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text:

4. To generate and print barcodes, click Generate/Print Barcodes.

5. You will now be transferred to page [IM188]:


Generate and Print Barcodes
To Generate Chemical and Location Barcodes
select the label type from the drop down list and click Generate
follow the instructions on the screen to view the PDF file displaying the barcodes
print the barcode file
Generate Chemical Barcodes:
UNIVERSAL Labels 80110 (4 x 20)
Generate

6. Select the label type from the pull-down menu.

7. Click Generate in order to generate the barcodes.

8. The following pop-up window [IM211] will appear:

9. After waiting about 60 seconds for the barcodes to generate, click the link The barcode PDF file is generating, please wait and click this link again. . If you click before the barcodes are generated, nothing happens. You get the same message again. If you click after the barcodes are generated, you will be transferred to pop-up page [IM211]:

10. The barcode(s) have now been generated.

11. Go on to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

12. Apply the barcode(s) to their proper containers.

Option 2: Find and Reprint Existing Barcodes

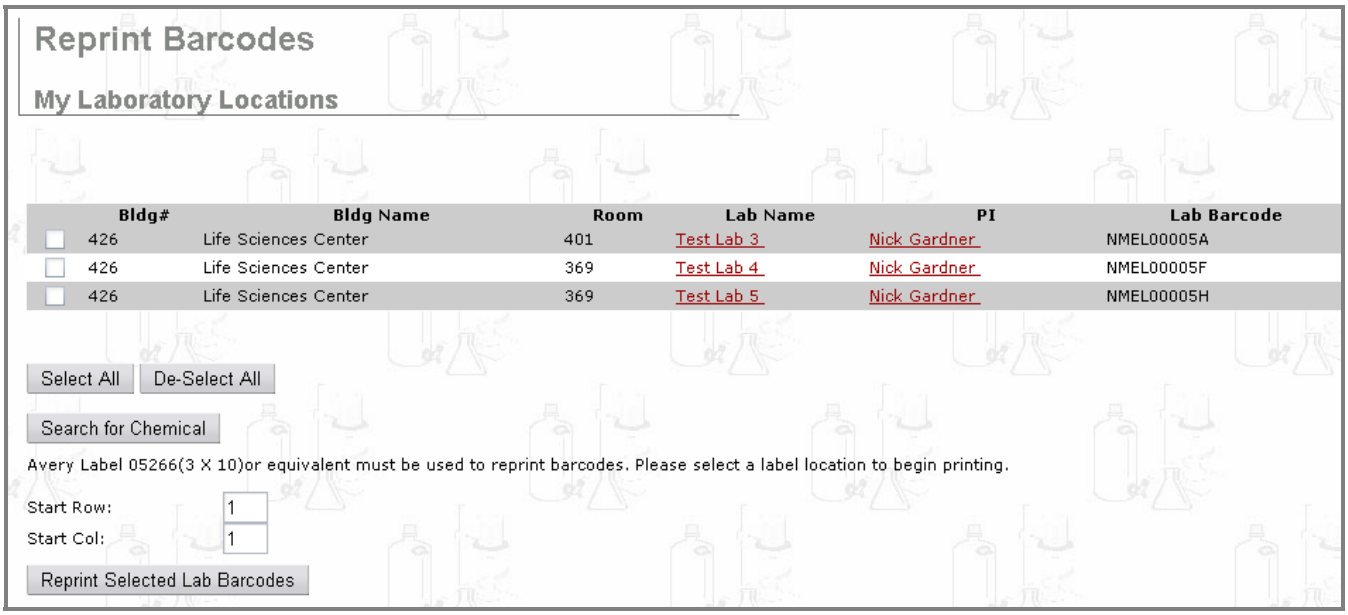
This option is used when a barcode, which has previously been entered into your inventory, needs to be reprinted. An example would be if the outside of a container became so contaminated with a chemical that the barcode can no longer be read or scanned.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text:

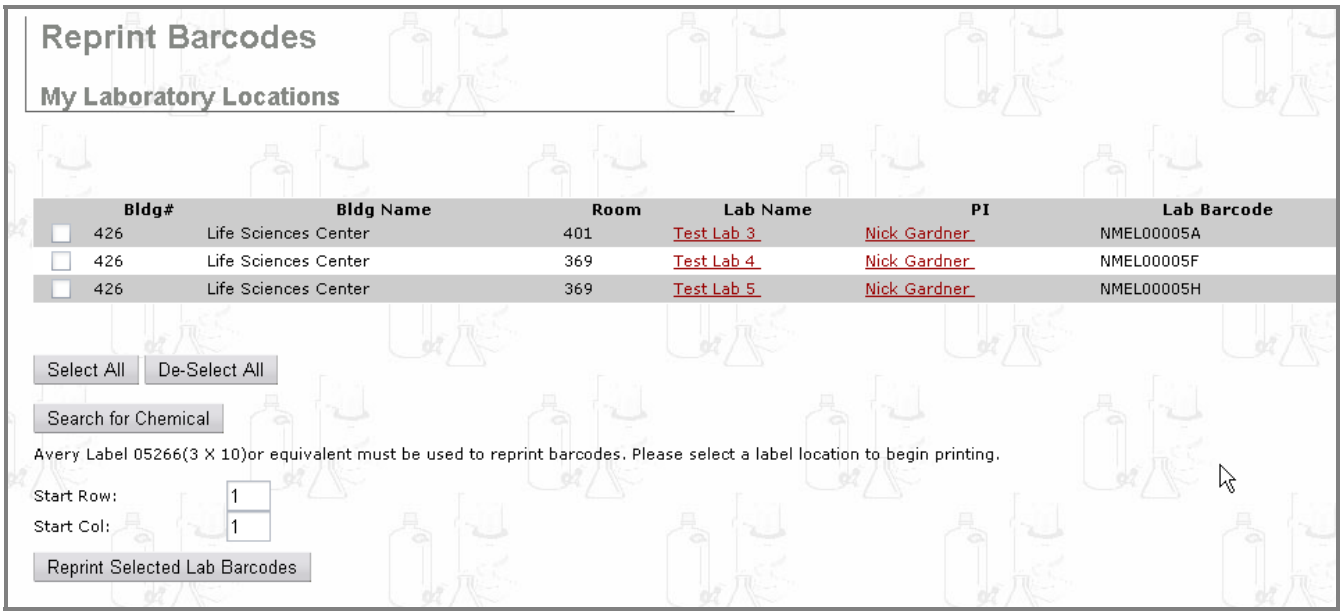
4. Click the link Find and Reprint Existing Barcodes . You will now be transferred to page [IM232]:


Reprint Barcodes
My Laboratory Locations
Bldg# Bldg Name Room Lab Name PI Lab Barcode
426 Life Sciences Center 401 Test Lab 3 Nick Gardner NMEL00005A
426 Life Sciences Center 369 Test Lab 4 Nick Gardner NMEL00005F
426 Life Sciences Center 369 Test Lab 5 Nick Gardner NMEL00005H
Select All
De-Select All
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Lab Barcodes

From this page, you have several choices:

Choice 1: Reprinting a Lab Barcode

1. Open page [IM232]:


Reprint Barcodes
My Laboratory Locations
Bldg# Bldg Name Room Lab Name PI Lab Barcode
426 Life Sciences Center 401 Test Lab 3 Nick Gardner NMEL00005A
426 Life Sciences Center 369 Test Lab 4 Nick Gardner NMEL00005F
426 Life Sciences Center 369 Test Lab 5 Nick Gardner NMEL00005H
Select All
De-Select All
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Lab Barcodes

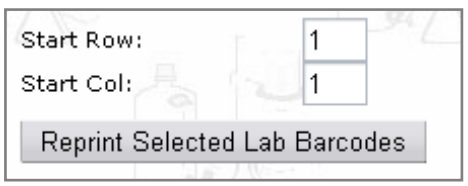
2. Click a check box ☑ next to the **Bldg#** to designate a specific lab.

3. To generate and print barcodes use an Avery Label 05266 (3 X 10) or equivalent.

   Click **Select All** to select all check boxes.

   Click **De-Select All** to deselect (= erase) all check boxes.

4. Enter the **Start Row:** and the **Start Col:** (Col = column) where you want the printer to start printing.



This option is available because not all labels on any one sheet will be used up. This option tells the printer where to start printing the labels. Look on your label sheet and enter where you want the printer to start printing.

5. Click Reprint Selected Lab Barcodes.

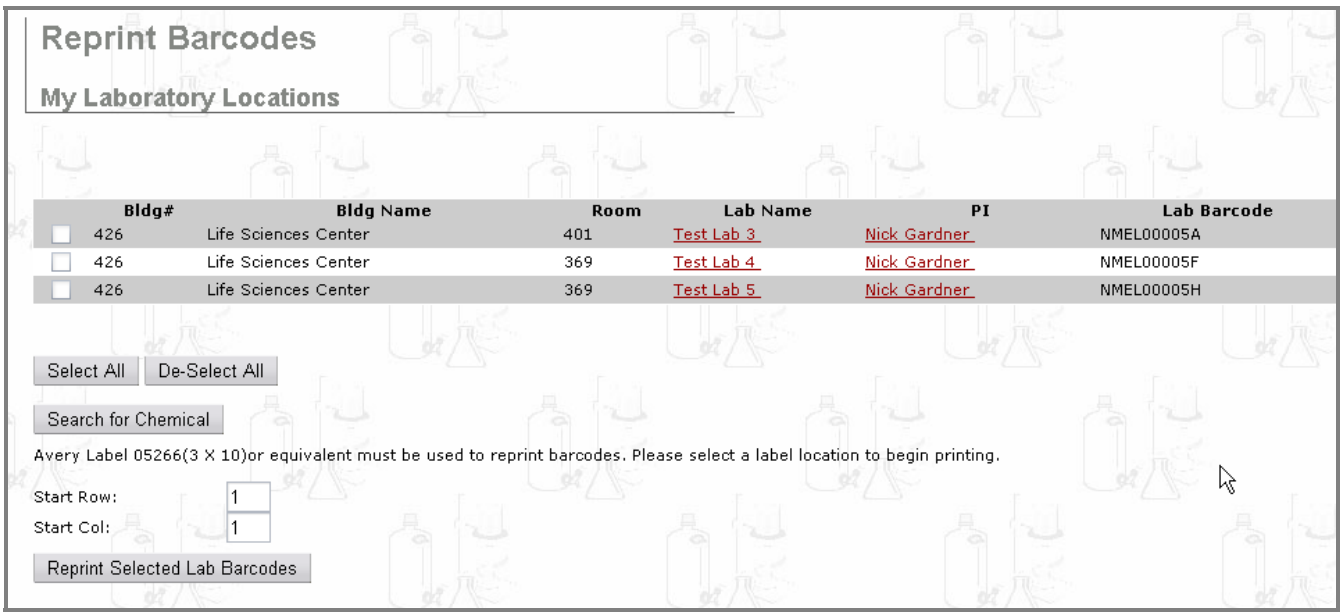
6. The following pop-up window [IM211] will appear:

7. Proceed to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

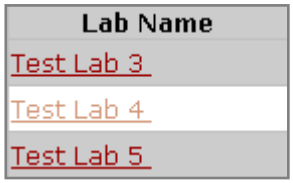
8. Apply the barcodes to their proper locations.

Choice 2: Reprinting a Storage Unit Barcode

1. Open page [IM232]:


Reprint Barcodes
My Laboratory Locations
Bldg# Bldg Name Room Lab Name PI Lab Barcode
426 Life Sciences Center 401 Test Lab 3 Nick Gardner NMEL00005A
426 Life Sciences Center 369 Test Lab 4 Nick Gardner NMEL00005F
426 Life Sciences Center 369 Test Lab 5 Nick Gardner NMEL00005H
Select All
De-Select All
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Lab Barcodes

2. Click a **Lab Name**, for example Test Lab 4:



3. You will now be transferred to page [IM234]. All the storage units associated with that specific lab location will now be displayed.

4. Click a check box ☑ next to the **Storage Unit** to designate a specific storage unit.

   Click Select All to select all check boxes.

   Click De-Select All to deselect (= erase) all check boxes.

5. To generate and print barcodes use an Avery Label 05266 (3 X 10) or equivalent.

6. Enter the Start Row: and the Start Col: (Col = column) where you want the printer to start printing.

   This option is available because not all labels on any one

sheet will be used up. This option tells the printer where to start printing the labels. Look on your label sheet and enter where you want the printer to start printing.

7. Click Reprint Selected Storage Unit Barcode.

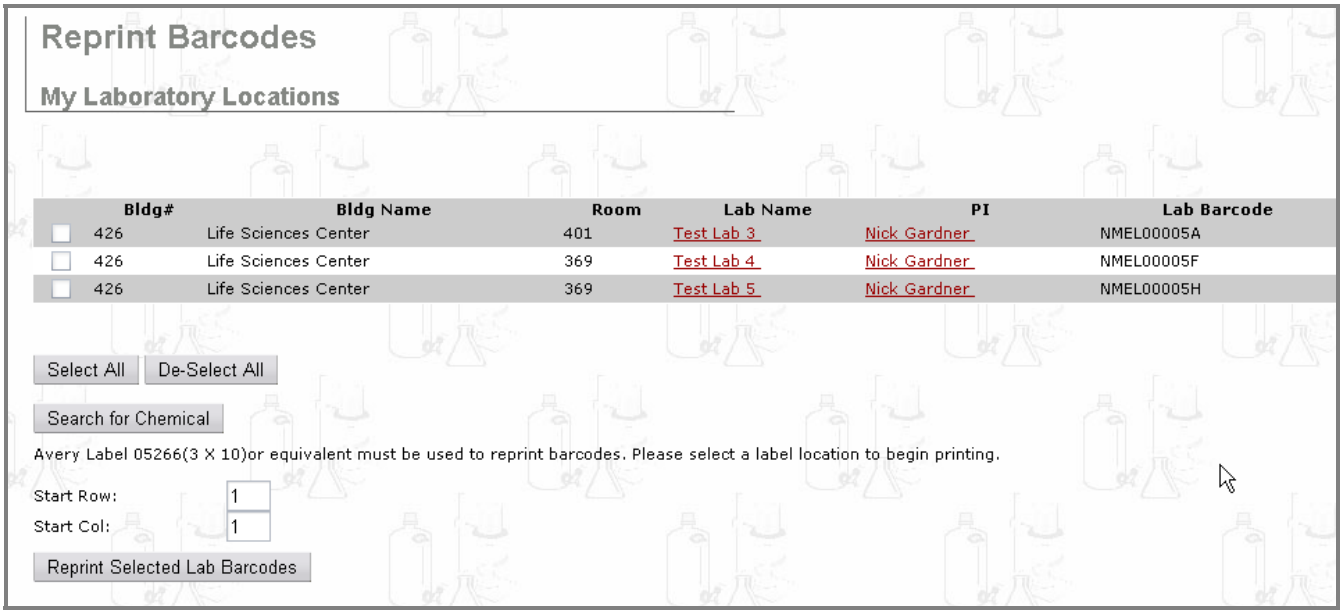
8. The following pop-up window [IM211] will appear:

9. Proceed to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

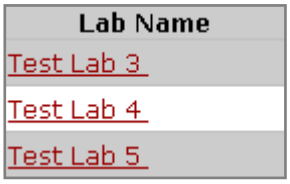
10. Apply the barcodes to their correct location(s).

Choice 3: Regenerating and Reprinting Chemical Container Barcodes

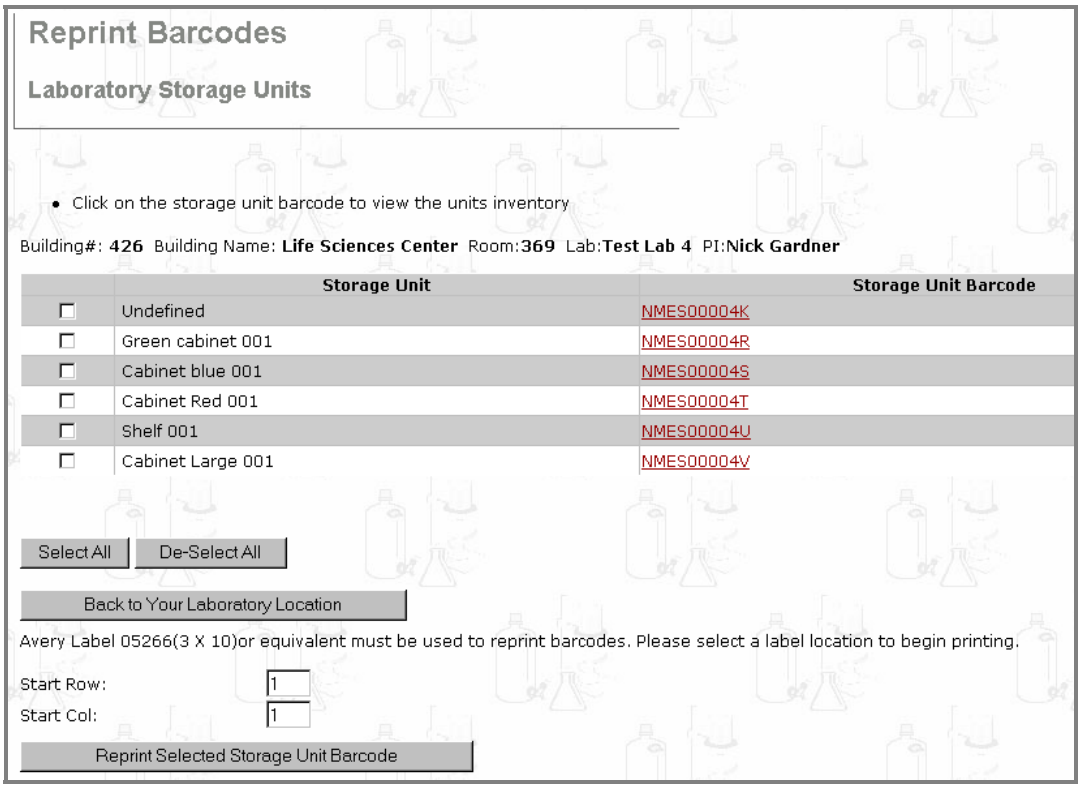
1. Open page [IM232]:


Reprint Barcodes
My Laboratory Locations
Bldg# Bldg Name Room Lab Name PI Lab Barcode
426 Life Sciences Center 401 Test Lab 3 Nick Gardner NMEL00005A
426 Life Sciences Center 369 Test Lab 4 Nick Gardner NMEL00005F
426 Life Sciences Center 369 Test Lab 5 Nick Gardner NMEL00005H
Select All
De-Select All
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Lab Barcodes

2. Click the Lab Name where the chemical container resides:

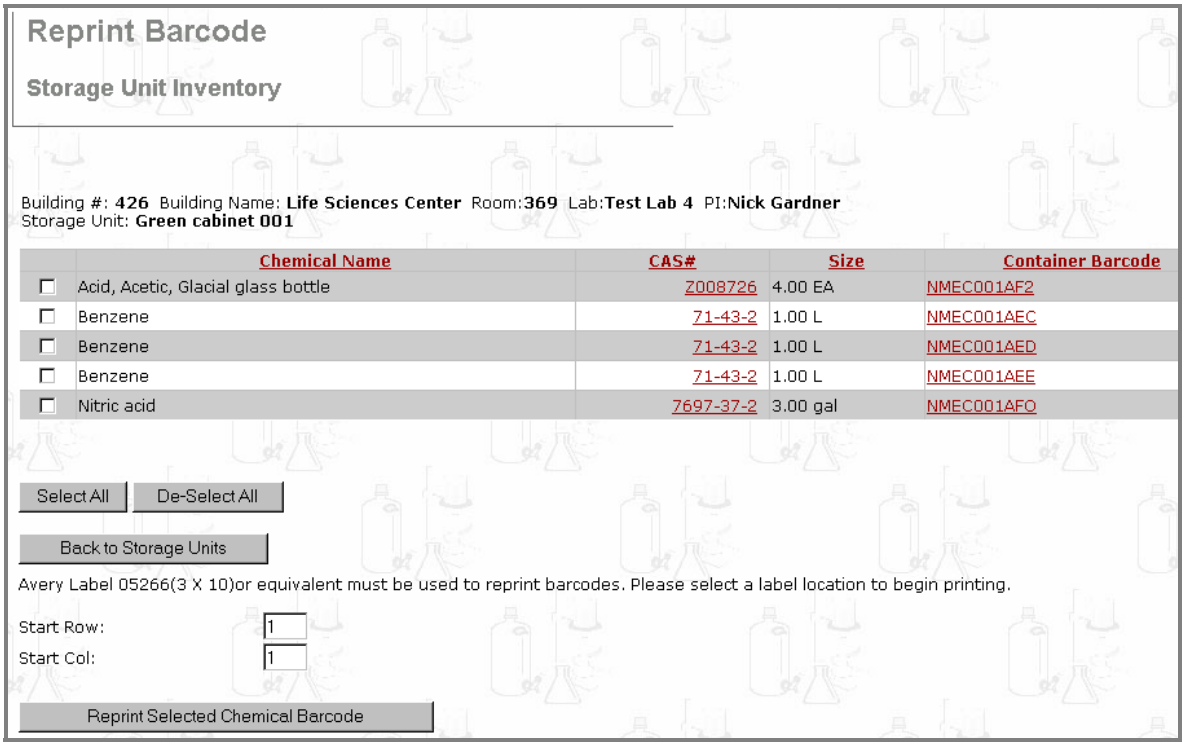


3. You will now be transferred to page [IM234]:


Reprint Barcodes
Laboratory Storage Units
Click on the storage unit barcode to view the units inventory
Building#: 426 Building Name: Life Sciences Center Room:369 Lab:Test Lab 4 PI:Nick Gardner
Storage Unit
Storage Unit Barcode
Undefined NMES00004K
Green cabinet 001 NMES00004R
Cabinet blue 001 NMES00004S
Cabinet Red 001 NMES00004T
Shelf 001 NMES00004U
Cabinet Large 001 NMES00004V
Select All
De-Select All
Back to Your Laboratory Location
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Storage Unit Barcode

4. Click the **Storage Unit Barcode**. In this case, barcode NMES00004R for Green cabinet 001.

5. You will now be transferred to page [IM236]:


Reprint Barcode
Storage Unit Inventory
Building #: 426 Building Name: Life Sciences Center Room:369 Lab:Test Lab 4 PI:Nick Gardner
Storage Unit: Green cabinet 001
Chemical Name
CAS#
Size
Container Barcode
Acid, Acetic, Glacial glass bottle Z008726 4.00 EA NMEC001AF2
Benzene 71-43-2 1.00 L NMEC001AEC
Benzene 71-43-2 1.00 L NMEC001AED
Benzene 71-43-2 1.00 L NMEC001AEE
Nitric acid 7697-37-2 3.00 gal NMEC001AFO
Select All
De-Select All
Back to Storage Units
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Chemical Barcode

6. Click the check box ☑ next to the **Chemical Name** to designate a specific chemical.

Click Select All to select all check boxes.

Click De-Select All to deselect (= erase) all check boxes.

7. To generate and print barcodes use an Avery Label 05266 (3 X 10) or equivalent.

8. Enter the Start Row: and the Start Col: (Col = column) where you want the printer to start printing.

This option is available because not all labels on any one sheet will be used up. This option tells the printer where to start printing the labels. Look on your label sheet and enter where you want the printer to start printing.

9. Click Reprint Selected Lab Barcodes.

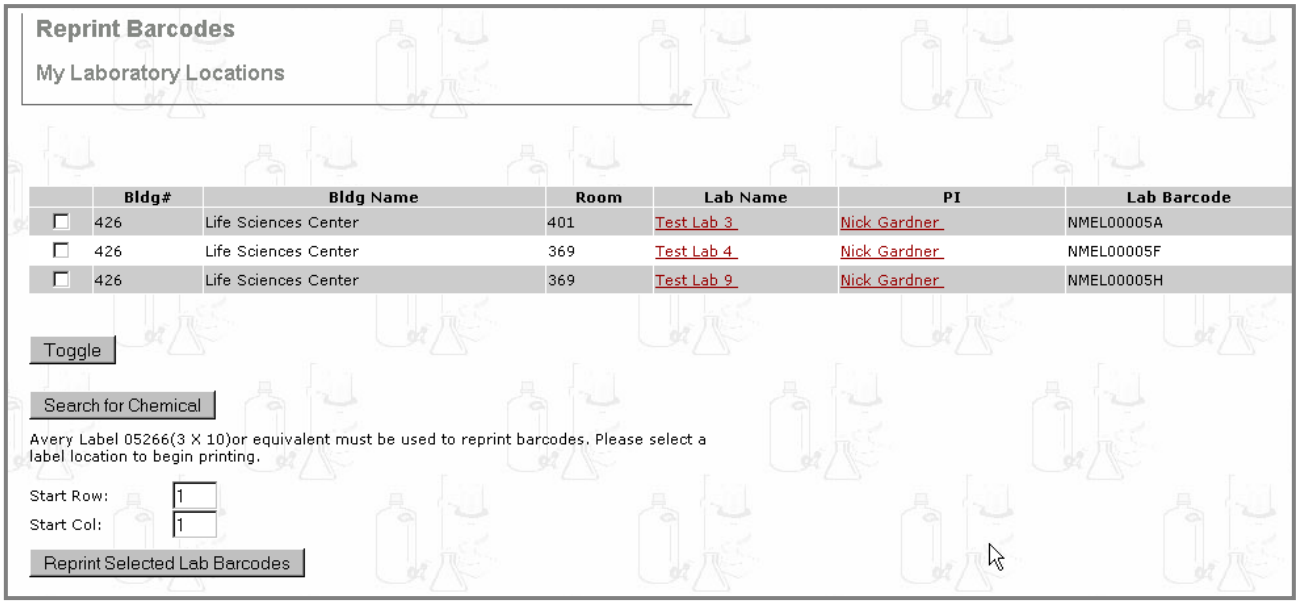
10. The following pop-up window [IM211] will appear:

11. Proceed to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

12. Apply the barcodes to their correct container(s).

Choice 4: Reprinting Chemical Container Barcodes by Searching for a Chemical by Lab

1. Open page [IM232]:

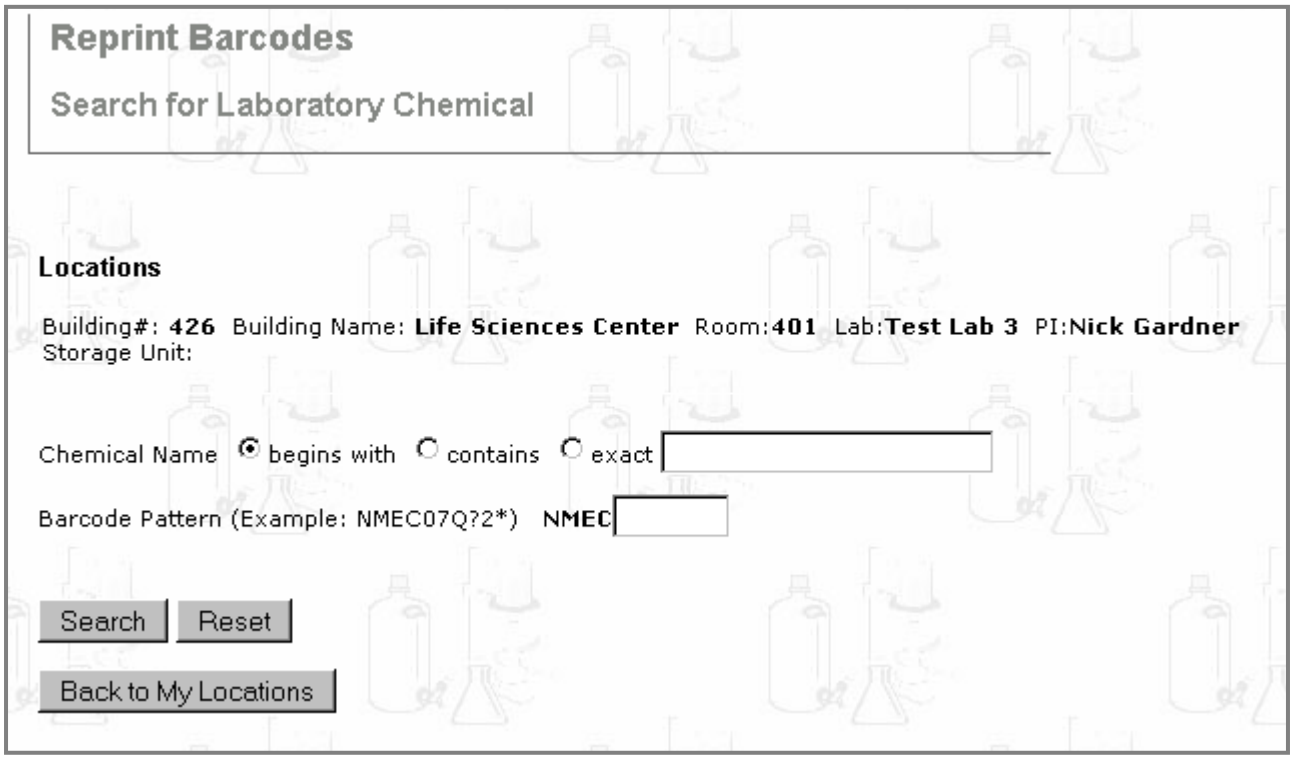

Reprint Barcodes
My Laboratory Locations
Bldg#
Bldg Name
Room
Lab Name
PI
Lab Barcode
426 Life Sciences Center 401 Test Lab 3 Nick Gardner NMEL00005A
426 Life Sciences Center 369 Test Lab 4 Nick Gardner NMEL00005F
426 Life Sciences Center 369 Test Lab 9 Nick Gardner NMEL00005H
Toggle
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Lab Barcodes

2. Click a check box ☑ next to the Bldg# to designate a specific lab.

3, Click Toggle to turn the click boxes on or off, as a group.

4. Click Search for Chemical.

5. You will now be transferred to page [IM233]:



6. Enter the Chemical Name into the Chemical Name field, for example:

Refine your search by choosing begins with, contains, or exact.

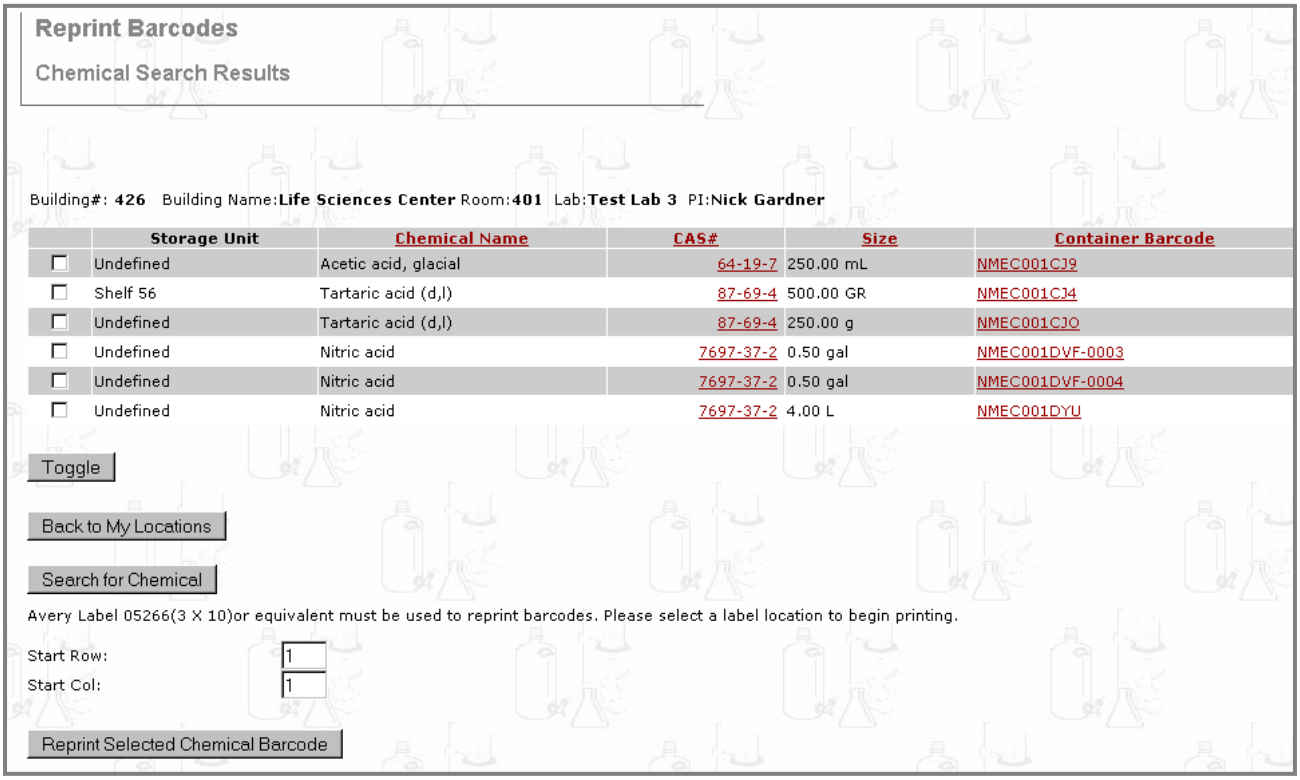
Alternately, enter the Barcode Pattern into the Barcode Pattern field, for example:

7. Click Reset to clear the data fields on this page.

Click Back to My Locations to return to page [IM232] without making any searches.

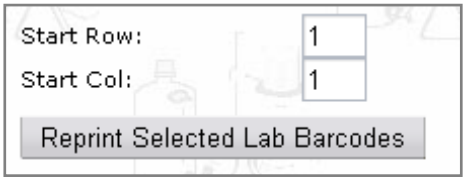
Click Search to search for the chemical in CAD.

8. After clicking Search, you will be transferred to page [IM235]:


Reprint Barcodes
Chemical Search Results
Building#: 426 Building Name:Life Sciences Center Room:401 Lab:Test Lab 3 PI:Nick Gardner
Storage Unit | Chemical Name | CAS# | Size | Container Barcode
Undefined | Acetic acid, glacial | 64-19-7 | 250.00 mL | NMEC001CJ9
Shelf 56 | Tartaric acid (d,l) | 87-69-4 | 500.00 GR | NMEC001CJ4
Undefined | Tartaric acid (d,l) | 87-69-4 | 250.00 g | NMEC001CJO
Undefined | Nitric acid | 7697-37-2 | 0.50 gal | NMEC001DVF-0003
Undefined | Nitric acid | 7697-37-2 | 0.50 gal | NMEC001DVF-0004
Undefined | Nitric acid | 7697-37-2 | 4.00 L | NMEC001DYU
Toggle
Back to My Locations
Search for Chemical
Avery Label 05266(3 X 10)or equivalent must be used to reprint barcodes. Please select a label location to begin printing.
Start Row: 1
Start Col: 1
Reprint Selected Chemical Barcode

9. Click on the check box ☑ of the chemical(s) whose barcode you wish to print.

10. Enter the Start Row: and the Start Col: (Col = column) where you want the printer to start printing.



This option is available because not all labels on any one sheet will be used up. This option tells the printer where to start printing the labels. Look on your label sheet and enter where you want the printer to start printing.

11. Click Reprint Selected Lab Barcodes.

12. The following pop-up window [IM211] will appear:

13. Proceed to **Appendix #2 - Printing Barcodes** at the end of this manual to learn more on how to print out your barcodes.

14. Apply the barcodes to their proper locations.

Alternately, from page [IM235],

- Click Toggle to turn the click boxes on or off, as a group.
- Click Back to My Locations to return to page [IM232] without printing any barcodes.
- Click Search for Chemical to search for a different chemical in CAD by lab location.

Manage Lab Inventory

The purpose of this section is to **View your Inventory Report**, to **View Campus Surplus** reports of other users, and **Generate PEC (Potentially Exploding Chemical) Expiration Aging Reports**.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

The seven options to manage lab inventory are:

Option 1: View My Inventory Report

To View My Inventory Report, click this link.

You will now be transferred to your inventory report page [IM635]:

This page lists the laboratories to search your inventory in.

Option 2: Upload Container Barcodes for Processing

To Upload Container Barcodes for Processing, click this link.

You will now be transferred to the Upload Container Barcodes page [IM630]:

This page allows you to upload the barcodes.

Option 3: Upload Barcodes for Storage Unit Reconciliation

To Upload Barcodes for Storage Unit Reconciliation, click this link.

You will now be transferred to the Storage Unit Reconciliation Barcode Upload page [IM625]:

This page allows you to upload the storage unit barcodes.

Option 4: Reconcile Storage Unit Inventory

To Reconcile Storage Unit Inventory, click this link.

You will now be transferred to the Storage Unit Reconciliation Storage Unit List page [IM627]:

This page allows you to view the storage unit reconciliation.

Option 5: Search for Chemicals in My Department

To Search for Chemicals in My Departments, click this link.

You will now be transferred to the page [IM534]:

This page allows you to search by chemical name or CAS# for all the chemicals in your department. It will list the chemicals that are surplus, your own chemicals, other people's chemicals, and the store's chemicals.

Option 6: Search Campus Surplus

To Search Campus Surplus Chemicals, click this link.

You will now be transferred to the Search Campus Surplus Chemicals page [IM562]:

This page allows you to search by chemical name or CAS# for surplus chemicals. It will only list the chemicals that have been declared surplus by labs connected to the system. This function will permit you to request a chemical transfer, so that your lab can use chemicals, which are surplus to another lab's requirements.

Option 7: Generate PEC Expiration Aging Report

To view Generate PEC Expiration Aging Report, click this link.

You will now be transferred to the PEC expiration aging report on page [WM471]:

This report informs you of expired PEC's and the dates when PEC's will expire.

Option 1: View Inventory Report

This option will permit you to view your inventory report for all locations to which you have access.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

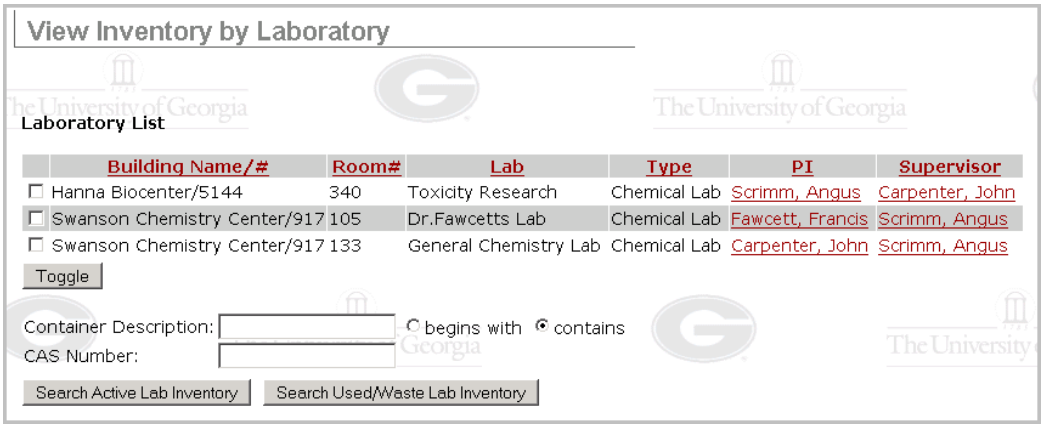
3. Scroll down to the following text:

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

4. To view your inventory report, click View My Inventory Report .

5. You will now be transferred to the **View Inventory by Laboratory** page [IM635]:

6. The following screen will appear allowing you to search your inventory by building or by chemical description or CAS number within a building.


View Inventory by Laboratory
Laboratory List
Building Name/# Room# Lab Type PI Supervisor
Hanna Biocenter/5144 340 Toxicity Research Chemical Lab Scrimm, Angus Carpenter, John
Swanson Chemistry Center/917 105 Dr.Fawcetts Lab Chemical Lab Fawcett, Francis Scrimm, Angus
Swanson Chemistry Center/917 133 General Chemistry Lab Chemical Lab Carpenter, John Scrimm, Angus
Toggle
Container Description:
begins with
contains
CAS Number:
Search Active Lab Inventory
Search Used/Waste Lab Inventory

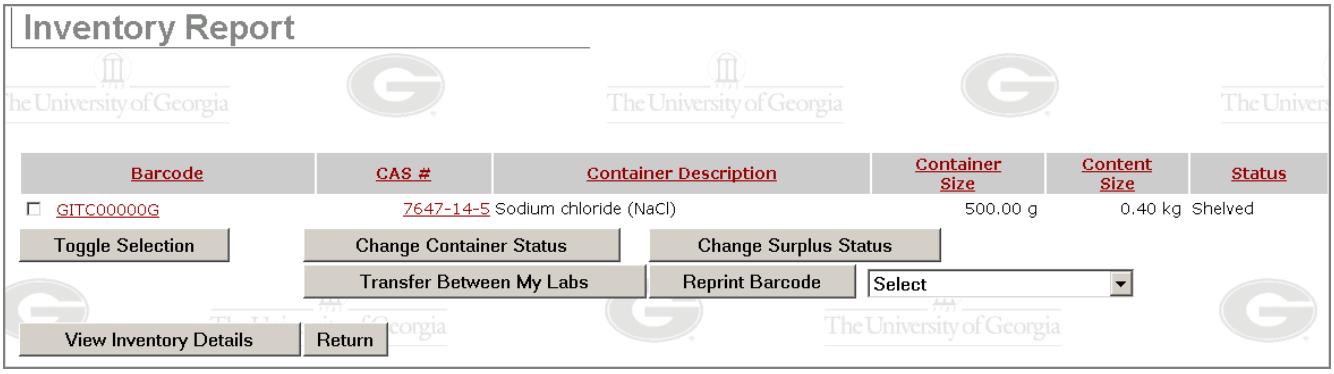
7. To view inventory in a specific building select the appropriate building by clicking on the check box ☑ beside the building name or click Toggle to select all buildings.

8. To view the inventory of a specific chemical, enter the ***Chemical Name*** or ***CAS#.*** To refine your Chemical Name: or CAS#: search in CAD, click ◉ begins with, ○ contains, or ○ exact .

9. Click Search Active Lab Inventory to view inventory in the active laboratories or click Search Used/Waste Lab Inventory to view inventory.

10. If there are no matching results in either the Active Lab inventory or in the Used/Waste Laboratory based on your search criteria, the following message will appear at the top of the screen: *Search did not find any match.*

11. If there are matching results, you will be transferred to Inventory Report page [IM554], for example:



There are several choices on this page.

Choice 1: Sorting Options

At the top of your inventory report, there is the following bar menu:

Click to sort the barcodes in ascending order from lowest to highest.

Click to sort the CAS#'s in ascending order by the first two digits from lowest to highest.

Click to sort the chemical container descriptions in alphabetical order from A to Z.

Click to sort the chemical containers alphabetically by unit measure. Remember that container size is the size of the container, not the size of the chemical contents.

Click to sort the chemical contents alphabetically by unit measure. Remember that content size is the size of the chemical contents, not the size of the chemical container.

Click to sort the chemical contents alphabetically by status description.

Click to sort the expiration dates by ascending order from the oldest or most recent date to the date furthest away in time. Remember that the date is written MM/DD/YY.

Choice 2: Viewing Container Details

Click a **barcode** to view [SC430] for a chemical.

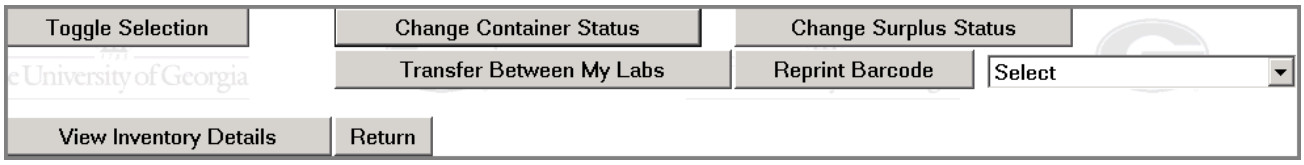
The **Container Details** include, for example, container information; chemical description; manufacturer and supplier (if available); location of chemical; PI and Lab Supervisor; as well as transfer history.

Click a **CAS#** to view [IM575] for a chemical.

The **Chemical Abstract and MSDS Details** include chemical description; health, physical, and fire hazard ratings; physical characteristics; as well as links for additional MSDS information. (MSDS = Material Safety Data Sheet)

Choice 3: Transferring Containers, etc.

Scroll down to the bottom of your screen. You will see the following bar menu:



1. Return

   Click this button to return to page [IM400]: Inventory Management

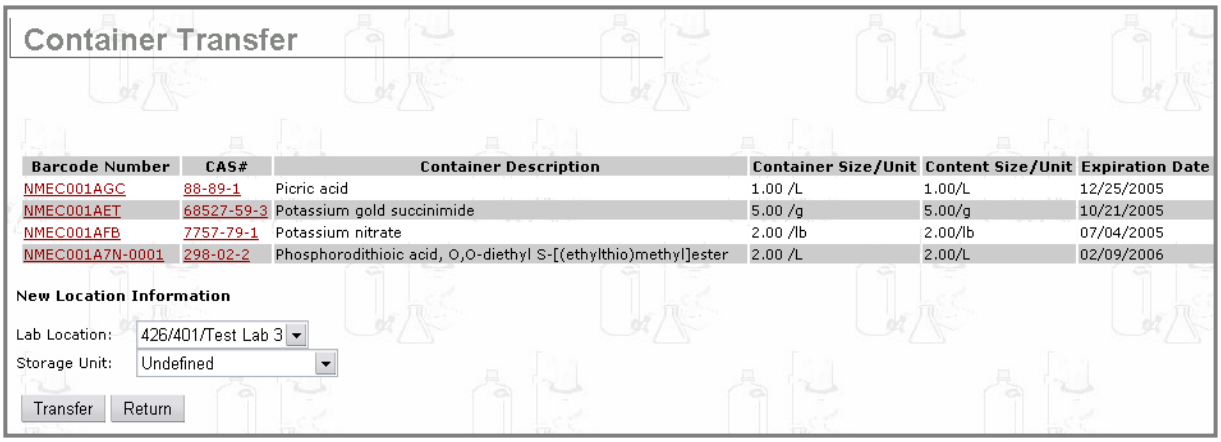
2. Transfer Between My Labs

   Click this button to transfer chemical containers within your lab location(s).

   To use this option, select at least one chemical container to be moved by clicking on a check box ☑ to the left of the barcode.

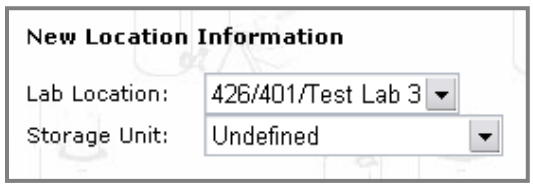
   Then, click Transfer Between My Labs.

   You will now be transferred to page [IM561]:



   This is the list of chemicals that you wish to move to the same target location.

   Choose a new Lab Location: and a new Storage Unit: by using the pull-down menus.



Click Transfer to accept and submit your chemical container transfer. You will now be transferred to page [IM555]:

Click Return to return to page [IM555] without making any changes:

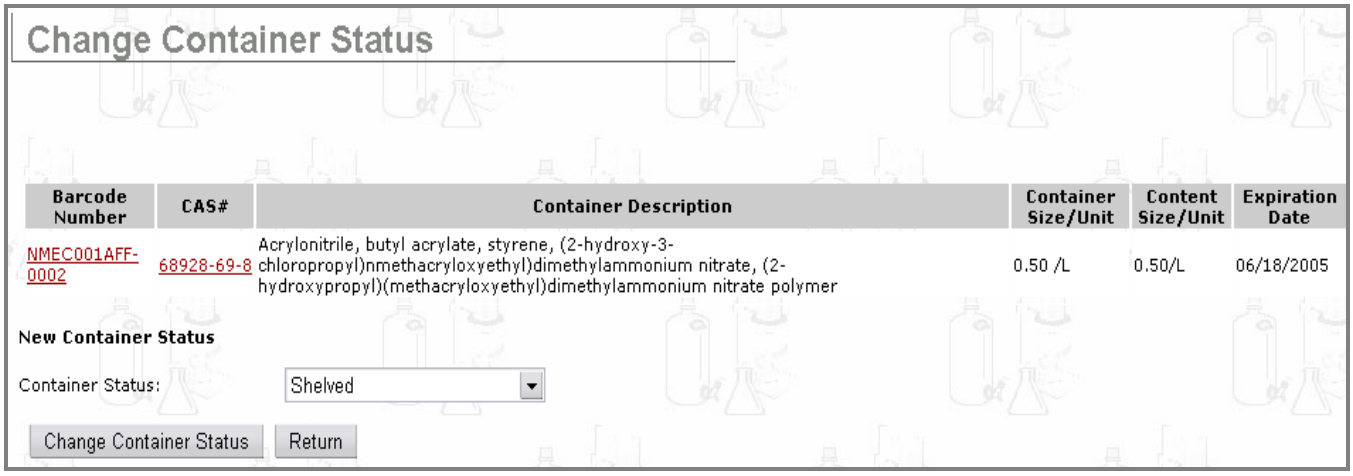
3. Change Container Status

Click this button to change the status of a chemical or chemicals.

To use this option, select at least one chemical container that will have their container status changed by clicking on a check box ☑ to the left of the barcode.

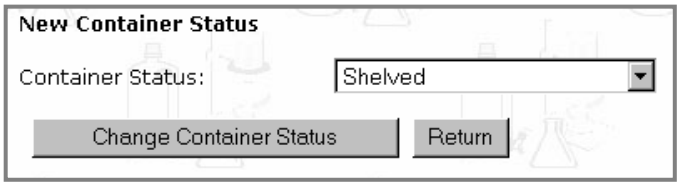
Then, click Change Container Status.

You will now be transferred to page [IM576]:

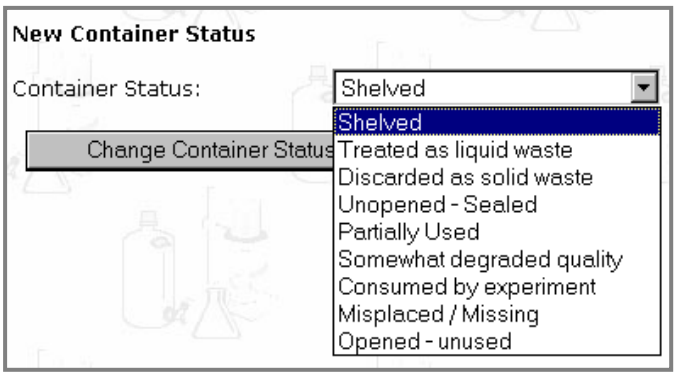


This is the list of chemicals, the status of which you wish to change. All of the chemicals on this list will receive the same new status.

Choose a new container status by using the pull-down menu.



Click the correct option from the list provided. The options available on this list are set by your institution. For more information about these options, please contact your CHEMATIX™ System Administrator.



Click Change Container Status to submit and change the status of the container(s). You will now be transferred to page [IM554]:

Click Return to return to page [IM554] without making any changes.

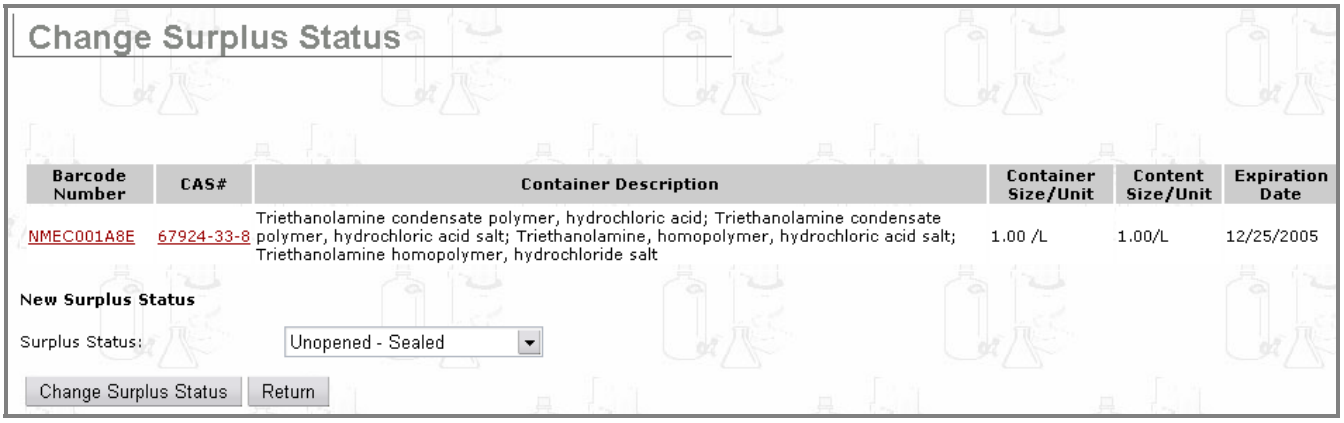
4. Change Surplus Status

Click this button to change the surplus status of a chemical or chemicals.

To use this option, select at least one chemical container that will have their surplus status changed, by clicking on a check box ☑ to the left of the barcode.

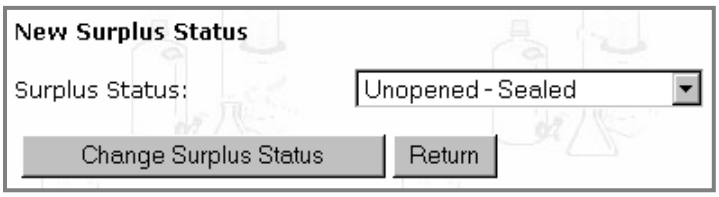
Then, click Change Surplus Status.

You will now be transferred to page [IM577]:

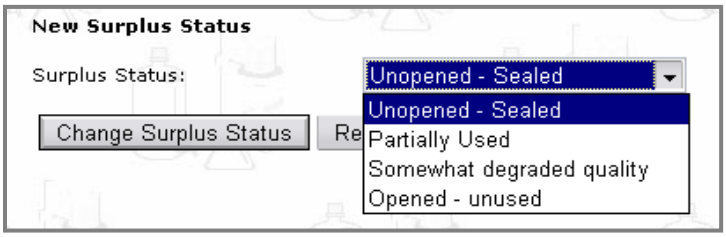


This is the list of chemicals, the surplus status of which you wish to change. All of the chemicals on this list will receive the same surplus status.

Choose a new surplus status by using the pull-down menu.



Click the correct option from the list provided. The options available on this list are set by a System Administrator. For more information about these options, please contact your System Administrator.

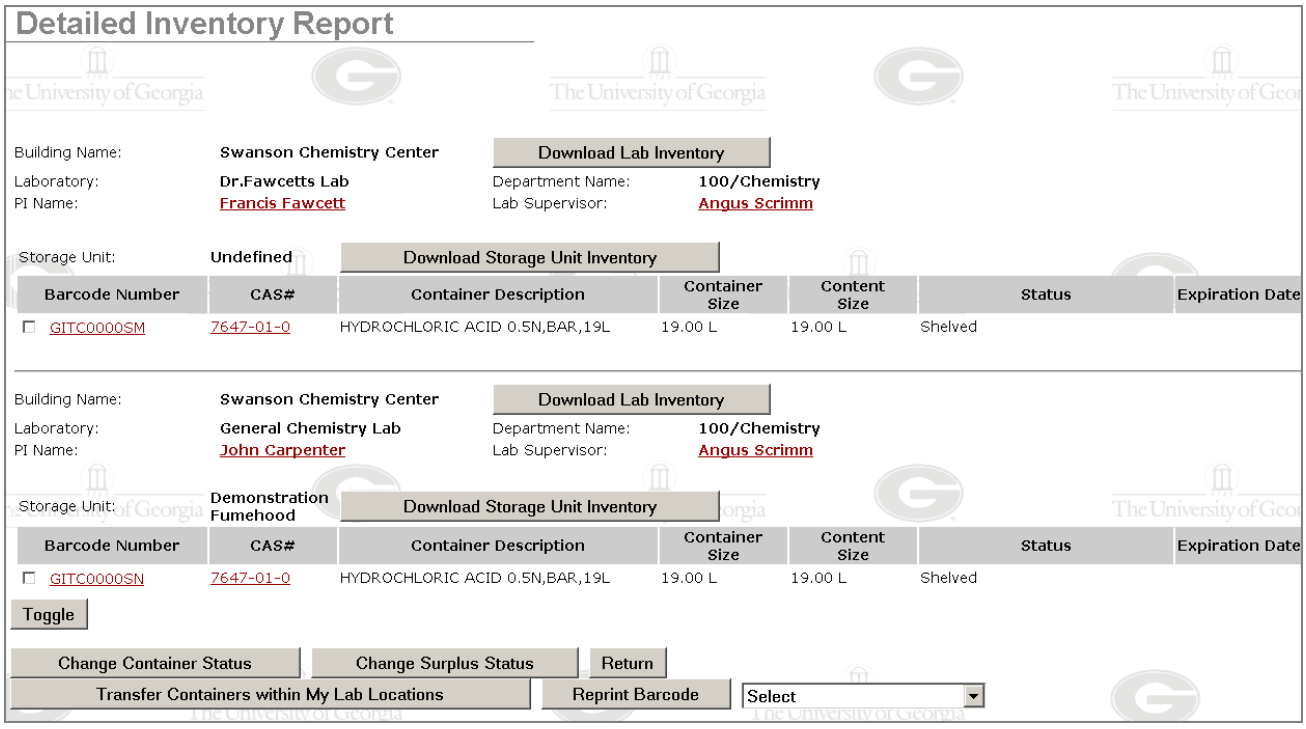


Click Change Surplus Status to submit and change the status of the container(s). You will now be transferred to page [IM554].

Click Return to return to **Inventory Report** [IM554] without making any changes.

5. View Inventory Details

Click this button to view a detailed inventory report [IM579] with a breakdown of inventory by, building name, laboratory, PI name, Lab Supervisor, etc. For example:



Your Inventory Report will give a list of all Storage Unit locations where you have inventory. If there is a Storage Unit that is empty of inventory, such a storage unit will not be shown here.

To view a list of all your existing Storage Units (both unoccupied and occupied) and to create additional Storage Units, see View My Locations in the Resources Module instruction manual.

Click Download Lab Inventory to download a .csv file (comma separated values file) of your inventory for a specific laboratory in a specific building. This button is located at the top of each separate storage unit inventory report. A .csv file can then be opened by a spreadsheet or database program. This file can also be copied, printed, or E-mailed.

Click Download Storage Unit Inventory to download a .csv file of your inventory for a specific storage unit in a specific lab within a specific building.

Scroll down to the bottom of the page and click Return to return to **Inventory Management** [IM400]:

Option 2: Upload Container Barcodes for Processing

This function is to upload your container barcodes using a barcode scanner or pasting the barcode into the textbox and submitting it to CHEMATIX™.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

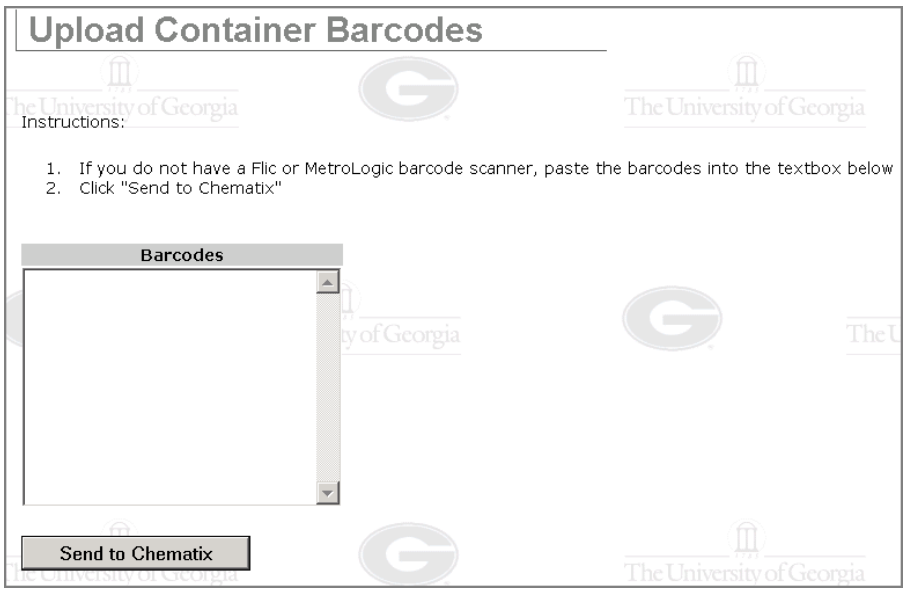
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text:

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

4. To up load container barcodes for processing, click Upload Container Barcodes for Processing.

5. You will now be transferred to the Upload Container Barcodes page [IM630]:

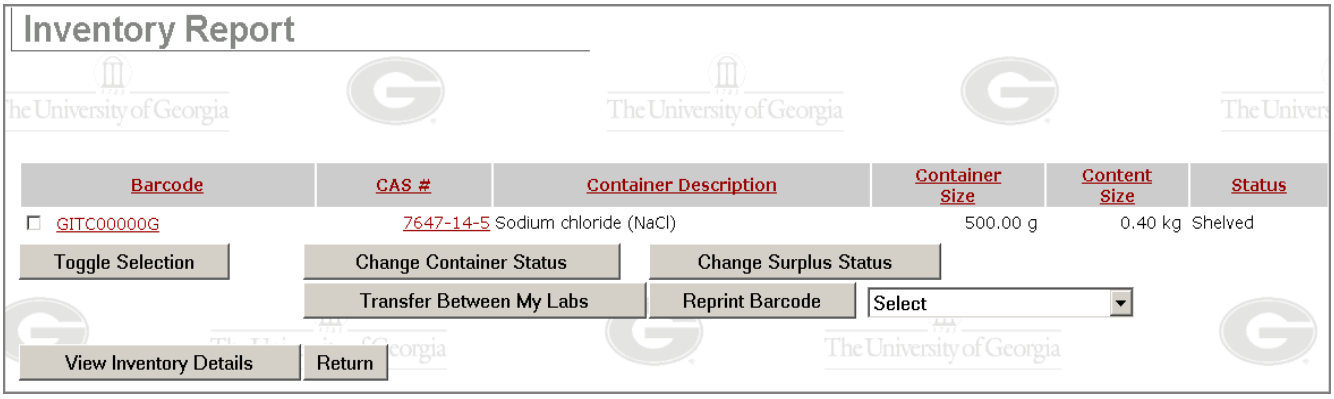

Upload Container Barcodes
Instructions:
1. If you do not have a Flic or MetroLogic barcode scanner, paste the barcodes into the textbox below
2. Click "Send to Chematix"
Barcodes
Send to Chematix

6. If you do not have a Flic or Metrologic barcode scanner, paste the barcodes into the textbox.

7. Click Send to Chematix.

8. If you entered an invalid barcode the following message will appear at the top of the screen: *No valid container barcode found.*

9. If the barcode is valid, you will be transferred to the Inventory Report page [IM554]:



10. You can now Change Container Status, Change Surplus Status, Transfer Between My Labs, Reprint Barcode, and View Inventory Details. Refer to Option 1: View Inventory Report section of this manual on page 63 for detailed instructions.

11. Click Return at the bottom of page [IM554] to return to **Inventory Management** [IM400]:

Option 3: Upload Barcodes for Storage Unit Reconciliation

This function is for uploading barcodes for storage unit reconciliation.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

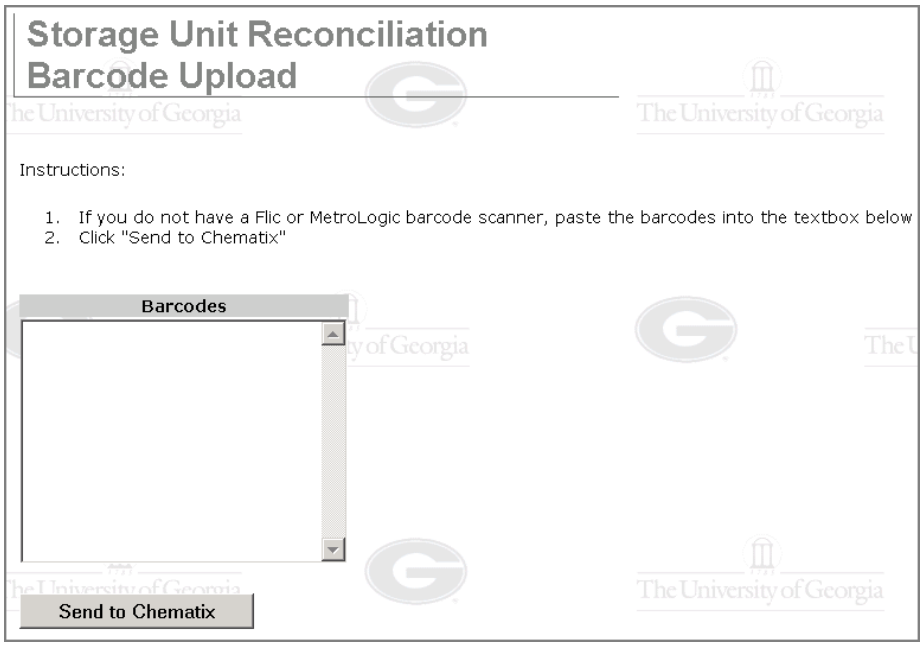
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text:

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

4. To up load container barcodes for storage unit reconciliation, click Upload Barcodes for Storage Unit Reconciliation.

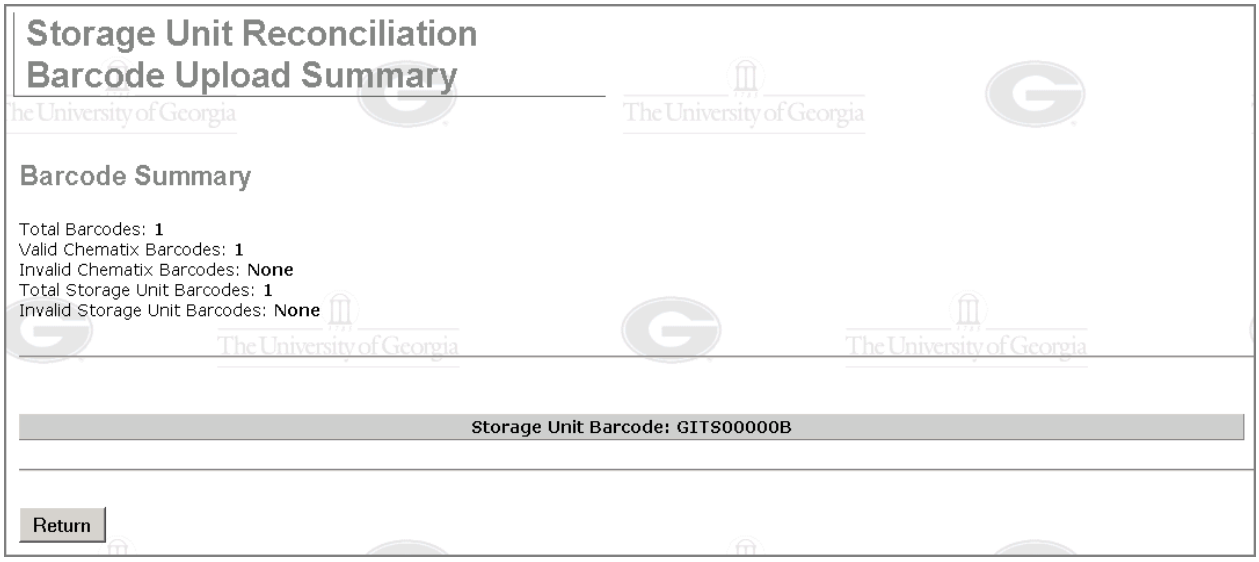
5. You will now be transferred to the Storage Unit Reconciliation Barcode Upload page [IM625]:


Storage Unit Reconciliation
Barcode Upload
Instructions:
1. If you do not have a Flic or MetroLogic barcode scanner, paste the barcodes into the textbox below
2. Click "Send to Chematix"
Barcodes
Send to Chematix

6. If you do not have a Flic or Metrologic barcode scanner, paste the barcodes into the textbox.

7. Click Send to Chematix.

8. You will now be transferred to the Storage Unit Reconciliation Barcode Upload Summary page [IM626]. For example:



9. The summary of the barcode is displayed summarizing the number of Total Barcodes, Valid Chematix Barcodes, Invalid Chematix Barcodes, Total Storage Unit Barcodes, and Invalid Storage Unit Barcodes.

10. Click Return to return to **Inventory Management** [IM400]:

Option 4: Reconcile Storage Unit Inventory

This function is used when you want to reconcile the inventory of chemicals in each storage unit in each laboratory within each building.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

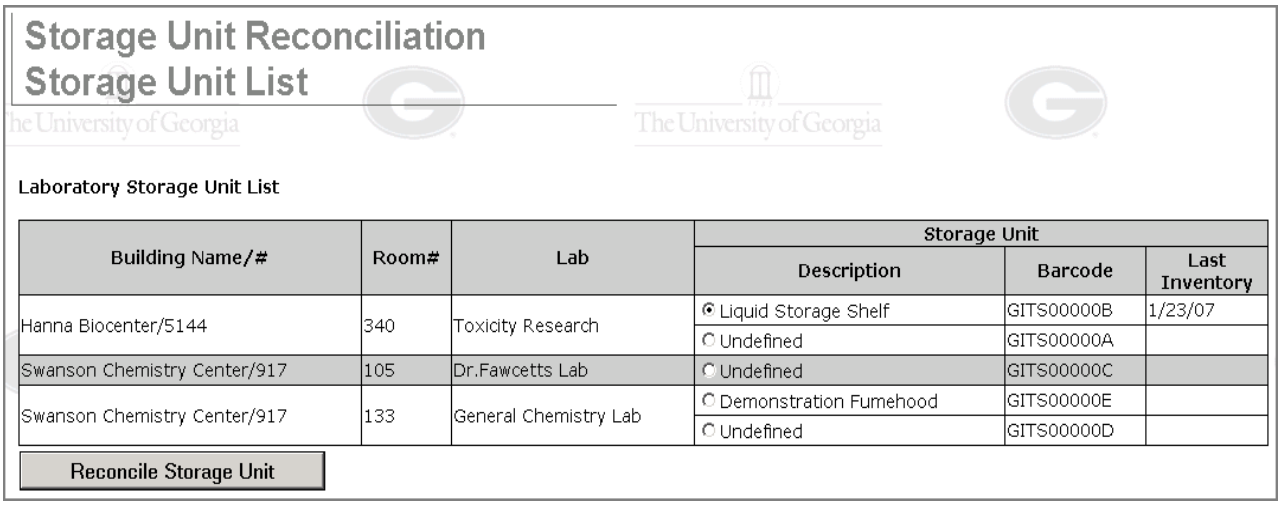
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text:

4. To reconcile inventory in storage units, click Reconcile Storage Unit Inventory .

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

5. You will now be transferred to the Storage Unit Reconciliation Storage Unit List page [IM627], for example:



Storage Unit Reconciliation
Storage Unit List

Laboratory Storage Unit List

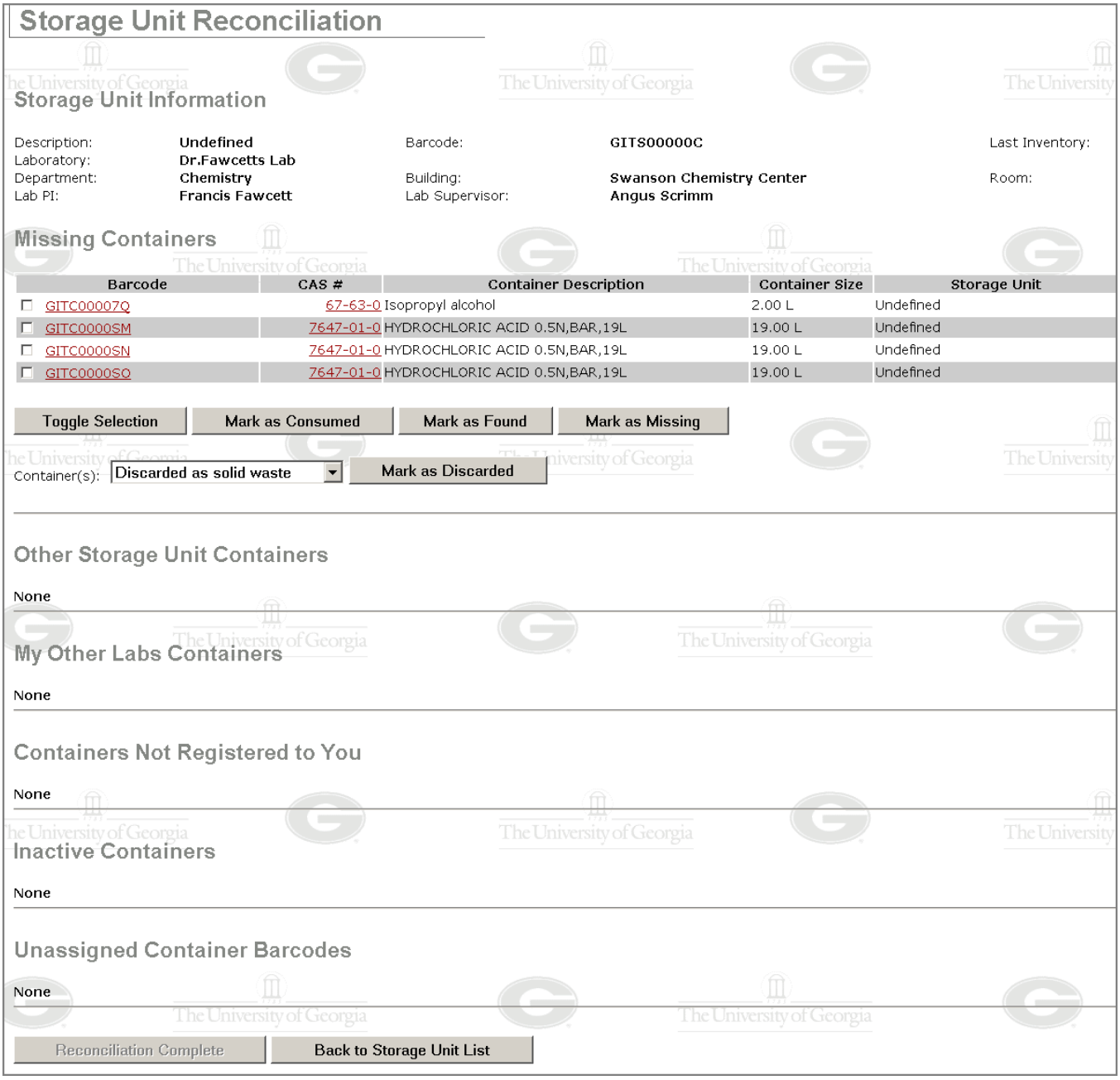
Building Name/#	Room#	Lab	Storage Unit		
			Description	Barcode	Last Inventory
Hanna Biocenter/5144	340	Toxicity Research	◉ Liquid Storage Shelf	GITS00000B	1/23/07
			○ Undefined	GITS00000A	
Swanson Chemistry Center/917	105	Dr.Fawcetts Lab	○ Undefined	GITS00000C	
Swanson Chemistry Center/917	133	General Chemistry Lab	○ Demonstration Fumehood	GITS00000E	
			○ Undefined	GITS00000D	

Reconcile Storage Unit

6. The storage unit in each lab within each building is listed. Select a storage unit to reconcile by clicking on the radio button ◉ beside the storage unit description name.

7. Click Reconcile Storage Unit.

8. You will now be transferred to the Storage Unit Reconciliation page [IM628]. For example:



This page summarizes the reconciliation of the storage unit selected. It displays the Storage Unit Information, Missing Containers, Other Storage Unit Containers, My Other Lab Containers, Containers Not Registered to You, Inactive Containers, Unassigned Container Barcodes.

The example above shows that there are four missing containers in the storage unit selected.

You can view the chemical information in each missing container by clicking on the barcode or you can view the Chemical Abstract and MSDS details by clicking on the CAS#.

There are 4 choices to reconcile the chemicals in the storage unit:

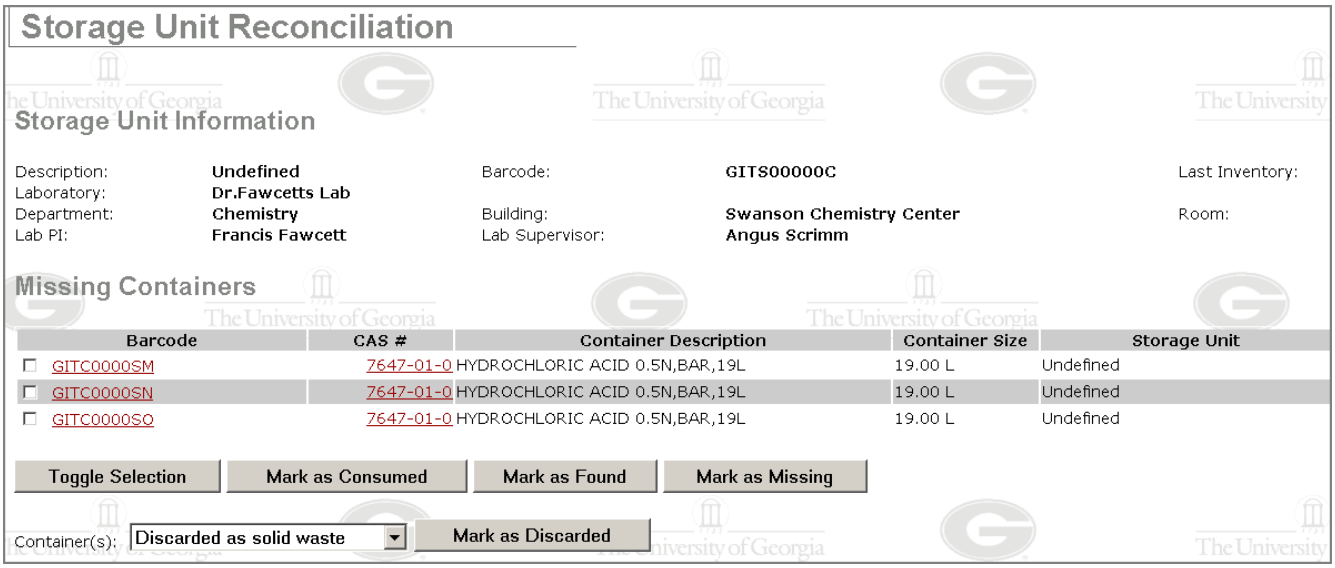
a) Mark as Consumed
b) Mark as Found
c) Mark as Missing
d) Mark as Discarded

Choice 1: Mark as Consumed

This choice is used when the chemical(s) was consumed by experiment.

1. Select the appropriate chemical(s) by checking off the check box ☑. If you want to select the entire list of chemicals, click on Toggle Selection.

2. Click Mark as Consumed. The chemical that was checked to be marked as consumed is now removed from the list of missing containers. Continuing from the example above, the chemical isopropyl alcohol from the previous example is now removed from the list of missing containers:



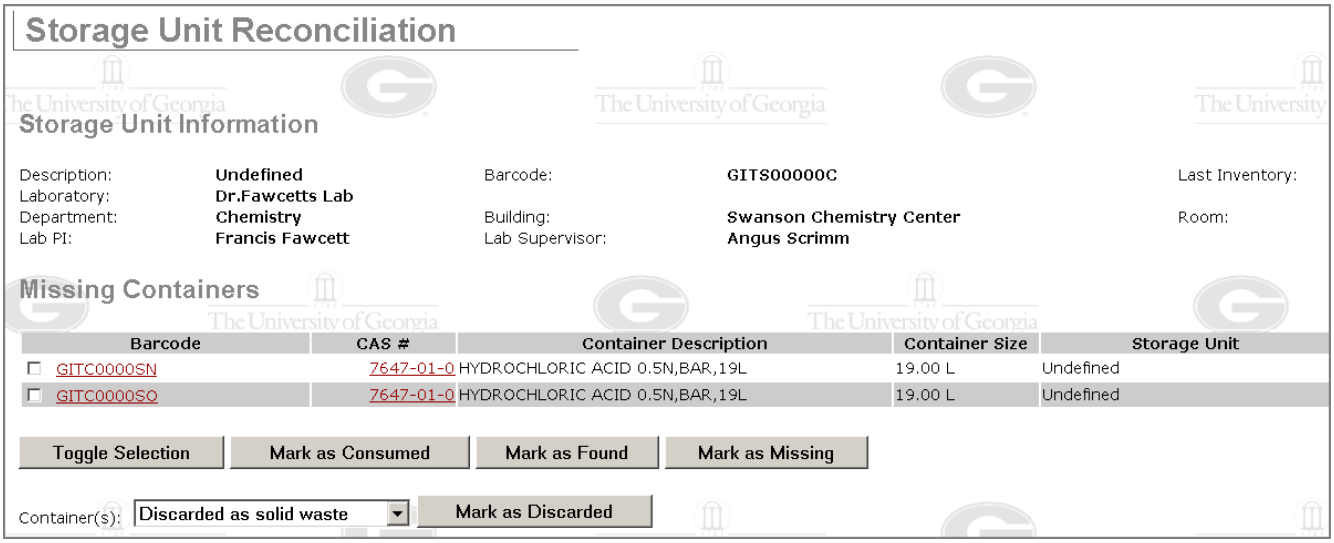
3. Click Back to Storage Unit List at the bottom of the page to return to the storage unit list page [IM 627] if you choose not to reconcile the chemicals or if you want to continue reconciling other storage units.

Choice 2: Mark as Found

This choice is used when the chemical(s) was misplaced and is now found.

1. Select the appropriate chemical(s) by checking off the check box ☑. If you want to select the entire list of chemicals, click on Toggle Selection.

2. Click Mark as Found. The chemical that was checked to be marked as found is now removed from the list of missing containers. Continuing from the same example, there are now only two chemicals in the list of missing containers:



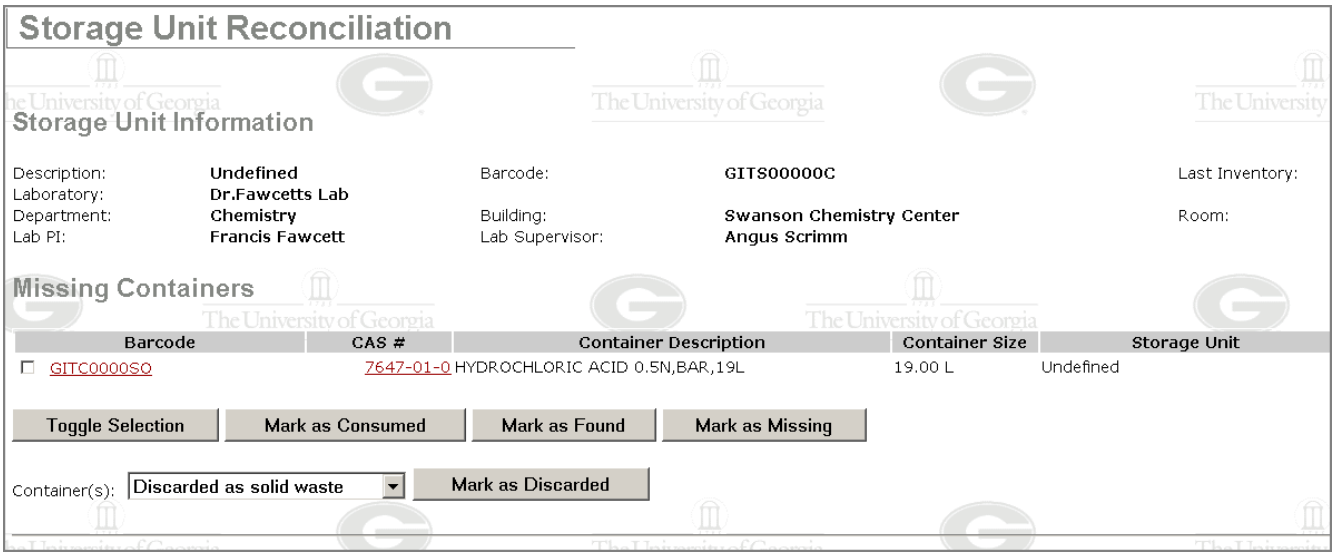
3. Click Back to Storage Unit List at the bottom of the page to return to the storage unit list page [IM 627] if you choose not to reconcile the chemicals or if you want to continue reconciling other storage units.

Choice 3: Mark as Missing

This choice is used when the chemical(s) is missing.

1. Select the appropriate chemical(s) by checking off the check box ☑. If you want to select the entire list of chemicals, click on Toggle Selection.

2. Click Mark as Missing. The chemical that was checked to be marked as missing is now removed from the list of missing containers. Continuing from the same example, there is now only one chemical in the list of missing containers:



3. Click Back to Storage Unit List at the bottom of the page to return to the storage unit list page [IM 627] if you choose not to reconcile the chemicals or if you want to continue reconciling other storage units.

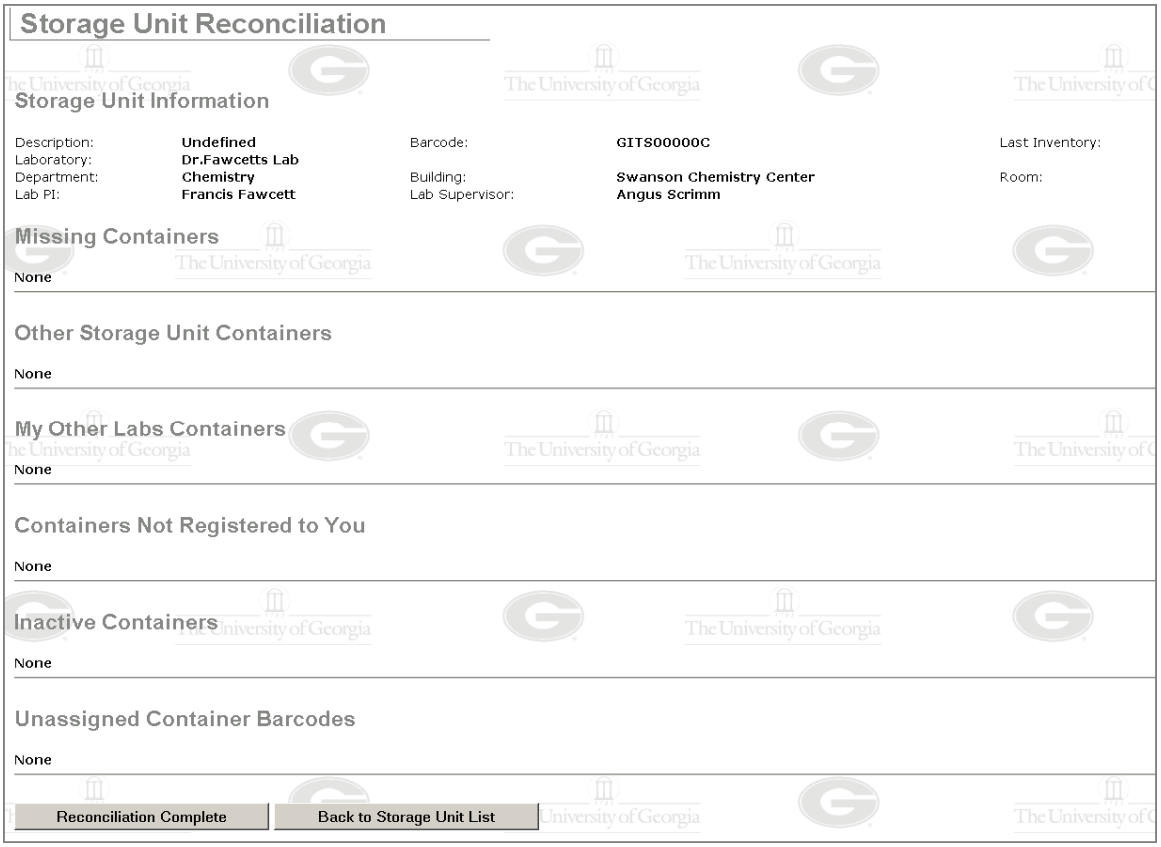
Choice 4: Mark as Discarded

This choice is used when the chemical(s) was discarded.

1. Select the appropriate chemical(s) by checking off the check box ☑. If you want to select the entire list of chemicals, click on Toggle Selection.

2. Click on the pull down menu beside Mark as Discarded and select the appropriate waste disposal method. Note that the selection is based on each institution's preference according to their business practice. The example shows the container can be marked discarded as solid waste, wastecard pickup requested, and treated as liquid waste:

3. Click Mark as Discarded. The chemical that was checked to be marked as discarded is now removed from the list of missing containers. The example below shows there are no missing containers as they have all been reconciled:



4. Click Reconciliation Complete when reconciliation is completed.

5. You will directed to a message at the top of screen: *Storage Unit Reconciliation Completed!*.

6. Click Back to Storage Unit List to return to the storage unit list.

7. If you need to reconcile another storage unit, select the appropriate storage unit by clicking on the radio button beside the storage unit description name. Repeat the process for reconciling the chemical(s) by the four methods as described.

8. If you do not need to reconcile another storage unit, click the click the Inventory button at the top of the CHEMATIX™ screen to return to the Inventory Management page [IM400]:

Option 5: Search for Chemicals in My Departments

This option is used when you need to search for chemicals in your department.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

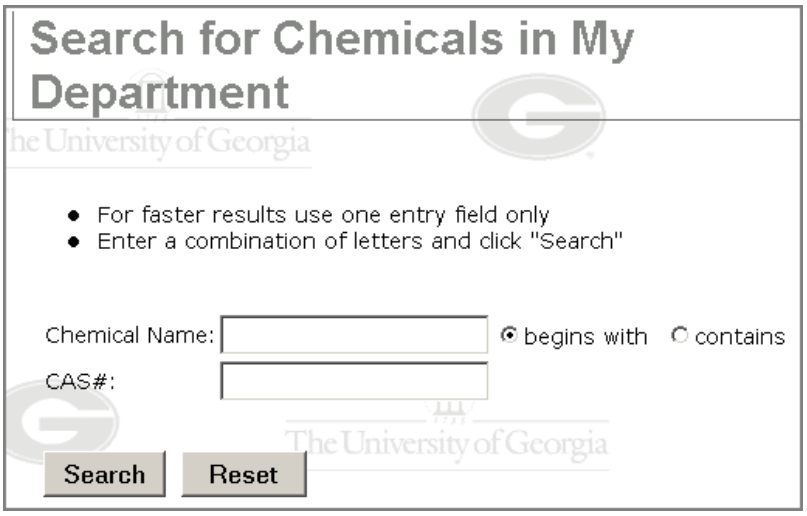
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text:

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

4. To search for chemicals in your department, click Search for Chemicals in My Departments.

5. You will now be transferred to the Search for Chemicals in My Department page [IM534], for example:



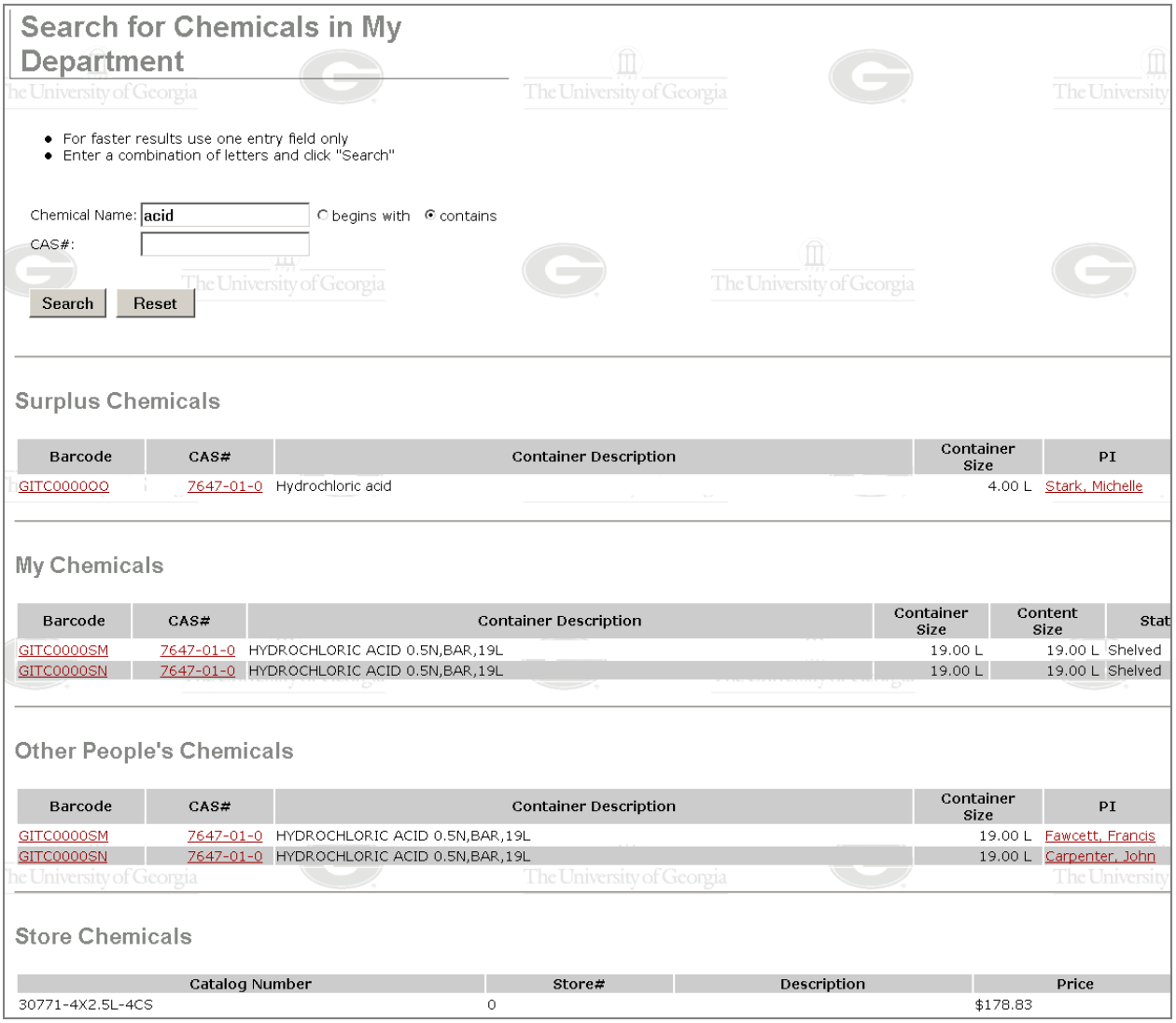
6. Enter ***Chemical Name*** or ***CAS#*** search criteria. To refine your Chemical Name: or CAS#: search in CAD, click begins with, contains, or exact.

7. Click Reset to clear the Chemical Name: and CAS#: data fields.

8. Click Search to search for the chemical(s) in your department.

9. If no matching chemicals are found, the following message will appear at the top of the screen: *No matching chemicals were found.* Note: Check your spelling as it may be a typo then search again.

10. The results will be displayed showing Surplus Chemicals, My Chemicals, Other People's Chemicals, and Store Chemicals. For example:



Search for Chemicals in My Department

- For faster results use one entry field only
- Enter a combination of letters and click "Search"

Chemical Name: acid ○ begins with ◉ contains

CAS#:

Search Reset

Surplus Chemicals

Barcode	CAS#	Container Description	Container Size	PI
GITC0000OO	7647-01-0	Hydrochloric acid	4.00 L	Stark, Michelle

My Chemicals

Barcode	CAS#	Container Description	Container Size	Content Size	Stat
GITC0000SM	7647-01-0	HYDROCHLORIC ACID 0.5N,BAR,19L	19.00 L	19.00 L	Shelved
GITC0000SN	7647-01-0	HYDROCHLORIC ACID 0.5N,BAR,19L	19.00 L	19.00 L	Shelved

Other People's Chemicals

Barcode	CAS#	Container Description	Container Size	PI
GITC0000SM	7647-01-0	HYDROCHLORIC ACID 0.5N,BAR,19L	19.00 L	Fawcett, Francis
GITC0000SN	7647-01-0	HYDROCHLORIC ACID 0.5N,BAR,19L	19.00 L	Carpenter, John

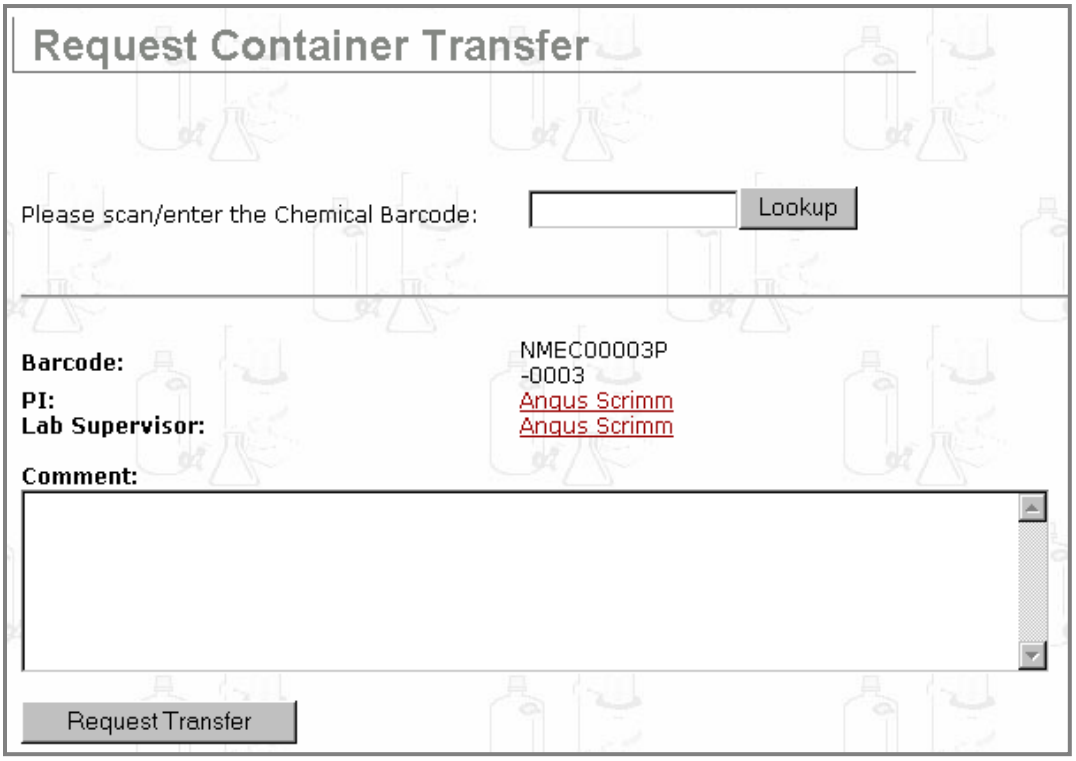
Store Chemicals

Catalog Number	Store#	Description	Price
30771-4X2.5L-4CS	0		$178.83

11. Click the CAS# to view the Chemical Abstract and MSDS details of the chemical.

12. Click on the PI to view the PI's contact information.

13. Click the Barcode Number to request a chemical transfer. You will now be transferred to page [IM567]:



14. Fill in any comment you wish to relay to the current owner and click Request Transfer. A message will be sent to the owner informing him or her of your desire to transfer this chemical to your lab.

15. Click the name of the PI or Lab Supervisor (in this case, Angus Scrimm) to obtain contact information for the owner.

Option 6: Search Campus Surplus

If you are in need of a specific chemical and want to check its availability as a surplused item by another laboratory, you should use this function. If a chemical is available as surplus from another user, you can request a transfer from its current lab. These transfers help to reduce purchase and waste disposal costs for labs and your institution.

1. To use this function, click the Inventory button menu at the top of the CHEMATIX™ screen:

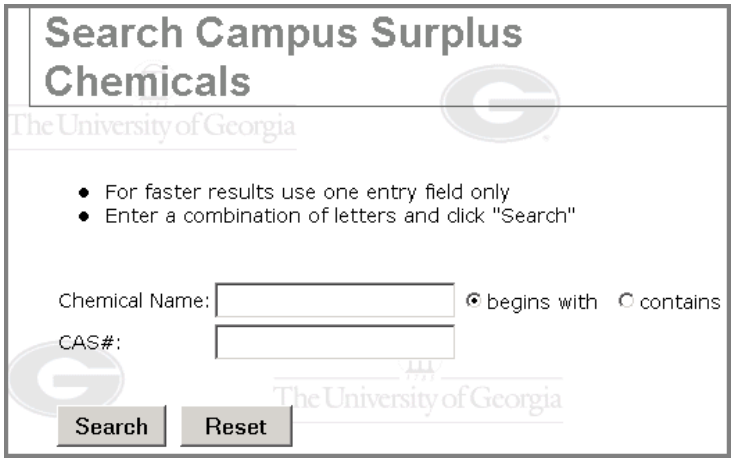
2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text (The availability of these functionalities is optional and determined by your institution):

4. To view your inventory report, click Search Campus Surplus Chemicals.

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

5. You will now be transferred to the Search Campus Surplus Chemicals page [IM562]:



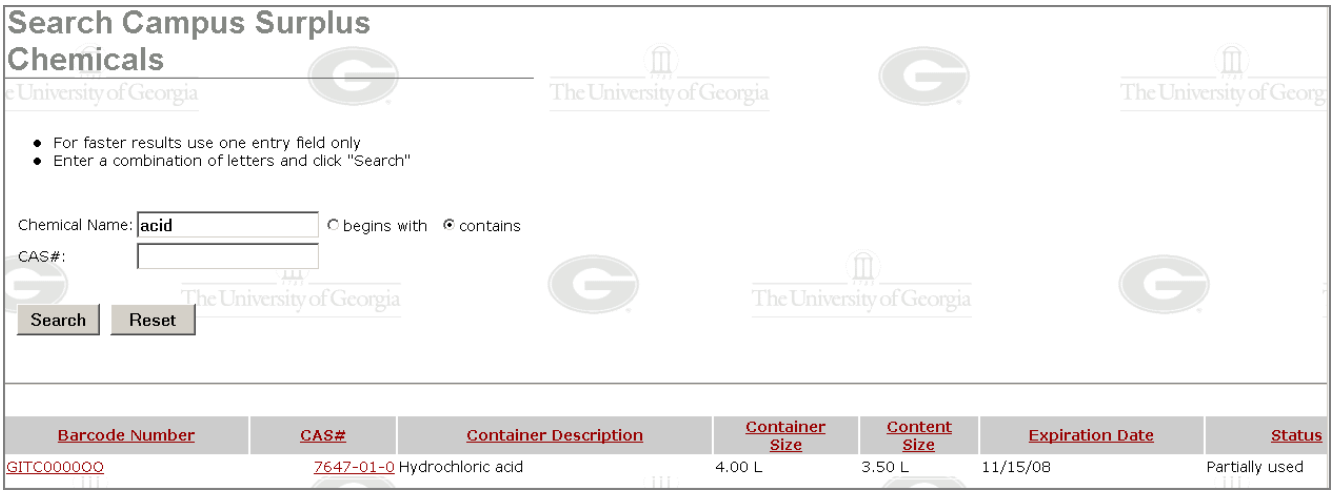
6. Enter ***Chemical Name*** or ***CAS#*** search criteria. To refine your Chemical Name: or CAS#: search in CAD, click begins with, contains, or exact.

7. Click Reset to clear the Chemical Name: and CAS#: data fields.

8. Click Search to search for a surplus.

9. If there isn't a surplus the following message will appear at the top of the screen: *No matching surplus chemicals were found on campus.*

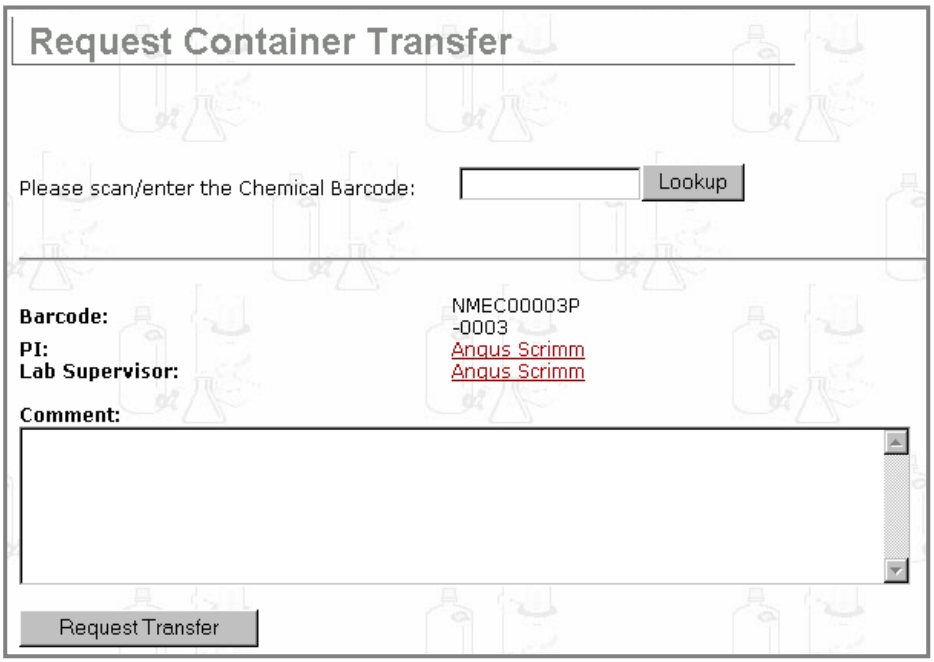
10. If there is a surplus, the results will be displayed. For example:



11. If the results list a few surplus chemicals, you can sort the view by clicking on the appropriate selection on the menu bar.

12. Click the CAS# to view the Chemical Abstract and MSDS details of the chemical.

13. Click the Barcode Number to request a chemical transfer. You will now be transferred to page [IM567]:



14. Fill in any comments you wish to relay to the current owner and click Request Transfer. A message will be sent to the owner informing him or her of your desire to transfer this chemical to your lab.

15. Click the name of the PI or Lab Supervisor (in this case, Angus Scrimm) to obtain contact information for the owner.

Option 7: Generate PEC Expiration Aging Report

The PEC Expiration Aging Report provides a summary of all Potentially Explosive Chemical containers in the user's inventory that have expired and those that are approaching expiration. The PEC designation is assigned by your institution's Department of Environmental Health & Safety.

1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

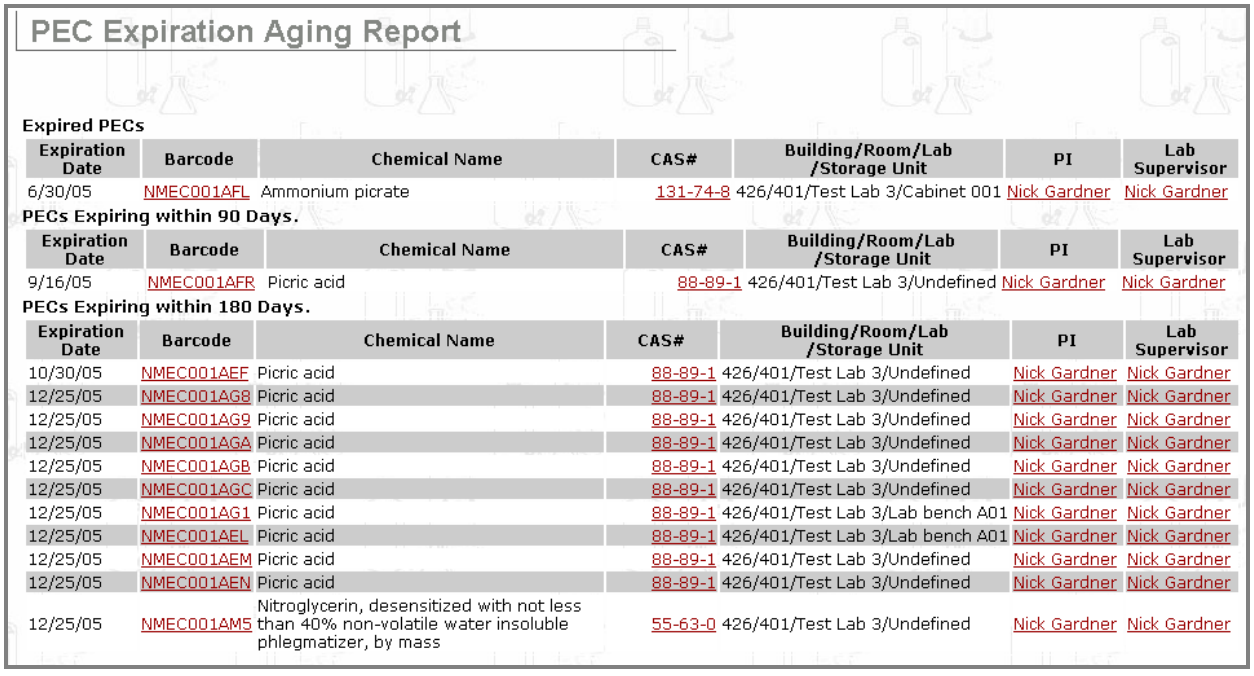
2. You will now see the opening page for **Inventory Management** [IM400]:

3. Scroll down to the following text:

4. To view your inventory report, click Generate PEC Expiration Aging Report .

Manage Lab Inventory
View My Inventory Report
Upload Container Barcodes for Processing
Upload Barcodes for Storage Unit Reconciliation
Reconcile Storage Unit Inventory
Search for Chemicals in My Departments
Search Campus Surplus Chemicals
Generate PEC Expiration Aging Report

5. You will now be transferred to page [WM471], for example:



PEC Expiration Aging Report

Expired PECs

Expiration Date	Barcode	Chemical Name	CAS#	Building/Room/Lab /Storage Unit	PI	Lab Supervisor
6/30/05	NMEC001AFL	Ammonium picrate	131-74-8	426/401/Test Lab 3/Cabinet 001	Nick Gardner	Nick Gardner

PECs Expiring within 90 Days.

Expiration Date	Barcode	Chemical Name	CAS#	Building/Room/Lab /Storage Unit	PI	Lab Supervisor
9/16/05	NMEC001AFR	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner

PECs Expiring within 180 Days.

Expiration Date	Barcode	Chemical Name	CAS#	Building/Room/Lab /Storage Unit	PI	Lab Supervisor
10/30/05	NMEC001AEF	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AG8	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AG9	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AGA	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AGB	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AGC	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AG1	Picric acid	88-89-1	426/401/Test Lab 3/Lab bench A01	Nick Gardner	Nick Gardner
12/25/05	NMEC001AEL	Picric acid	88-89-1	426/401/Test Lab 3/Lab bench A01	Nick Gardner	Nick Gardner
12/25/05	NMEC001AEM	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AEN	Picric acid	88-89-1	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner
12/25/05	NMEC001AM5	Nitroglycerin, desensitized with not less than 40% non-volatile water insoluble phlegmatizer, by mass	55-63-0	426/401/Test Lab 3/Undefined	Nick Gardner	Nick Gardner

For each chemical container, the following details are linked. These links will enable you to obtain additional information:

Barcode link – displays Container Details, page [SC430].

CAS# link – displays Chemical Abstract and MSDS Details, page [IM575]

PI link – displays PI contact information, page [IM237]

Lab Supervisor link – displays Lab Supervisor contact information, page [IM237]

NOTE:
Use the expiration dates and other links on the **PEC Expiration Aging Report** [WM471] to ensure that all PEC's are consumed and/or disposed of before their expiration dates.

Chemical Abstract Database (CAD)

CAD is a CHEMATIX™-specific chemical database. CAD is a collection of chemical profiles used as a reference database to achieve data consistency and integrity within CHEMATIX™. Entries in CAD are also linked to the CAS registry.

Since all items in the institution's inventory are linked to entries in CAD, any updates made in CAD are automatically reflected in the inventories as well.

CAD is institution specific. CAD is maintained and supervised by authorized personnel in your institution's Department of Environmental Health & Safety, whose responsibilities also include reviewing all new entries.

The function permits you to look up chemical container information by searching CAD.

Search for a Chemical in CAD

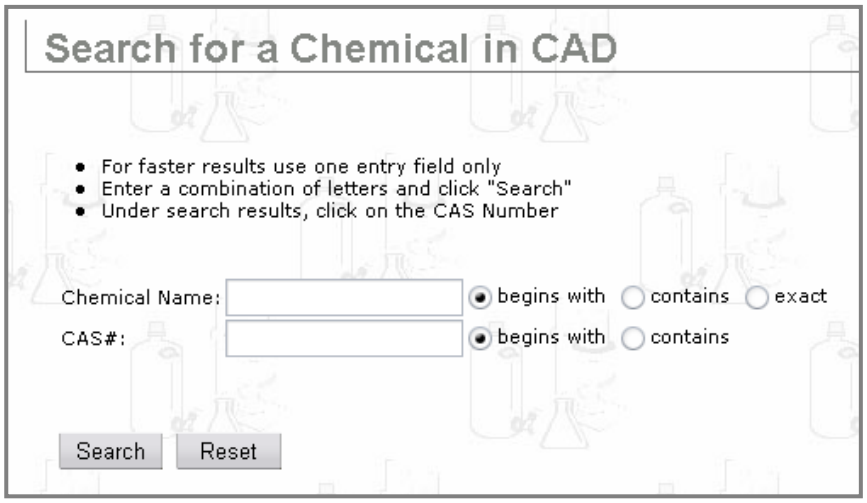
1. To use this function, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text:

4. To search for a chemical in CAD, click Search For a Chemical in CAD.

5. You will now be transferred to page [WM474]:



6. Enter the Chemical Name: and/or the CAS#: (Chemical Abstracts Services Number) to search CAD.

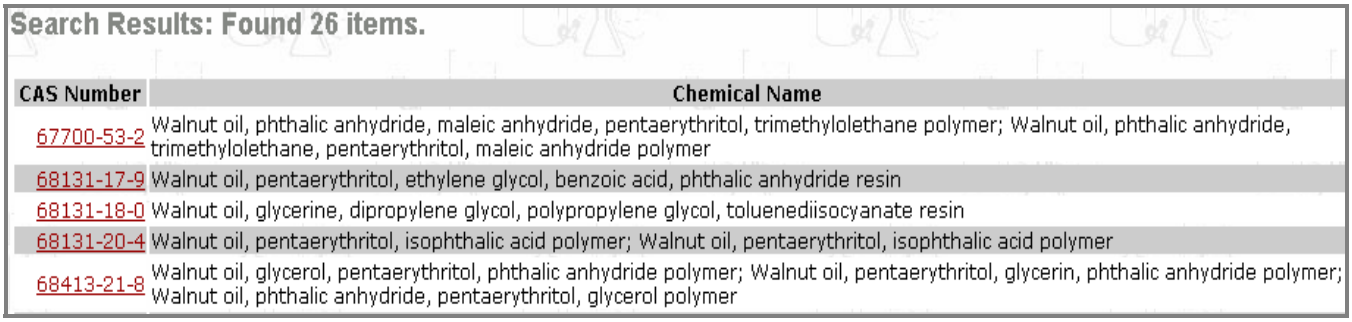
7. Click Search to find the chemical name in CAD.

Click Reset to clear the Chemical Name: and CAS#: data fields.

NOTE:
When searching CAD, remember that singular and plural forms of certain chemicals may refer to different chemicals.

To refine your CAD search, click begins with, contains, or exact chemical name. The default is begins with.

If the chemical name or CAS# is in CAD, a generated list will appear at the bottom of the page, for example:



Search Results: Found 26 items.

CAS Number	Chemical Name
67700-53-2	Walnut oil, phthalic anhydride, maleic anhydride, pentaerythritol, trimethylolethane polymer; Walnut oil, phthalic anhydride, trimethylolethane, pentaerythritol, maleic anhydride polymer
68131-17-9	Walnut oil, pentaerythritol, ethylene glycol, benzoic acid, phthalic anhydride resin
68131-18-0	Walnut oil, glycerine, dipropylene glycol, polypropylene glycol, toluenediisocyanate resin
68131-20-4	Walnut oil, pentaerythritol, isophthalic acid polymer; Walnut oil, pentaerythritol, isophthalic acid polymer
68413-21-8	Walnut oil, glycerol, pentaerythritol, phthalic anhydride polymer; Walnut oil, pentaerythritol, glycerin, phthalic anhydride polymer; Walnut oil, phthalic anhydride, pentaerythritol, glycerol polymer

Click the CAS Number and you will be transferred to page [IM575] to view **Chemical Abstract and MSDS Details**.

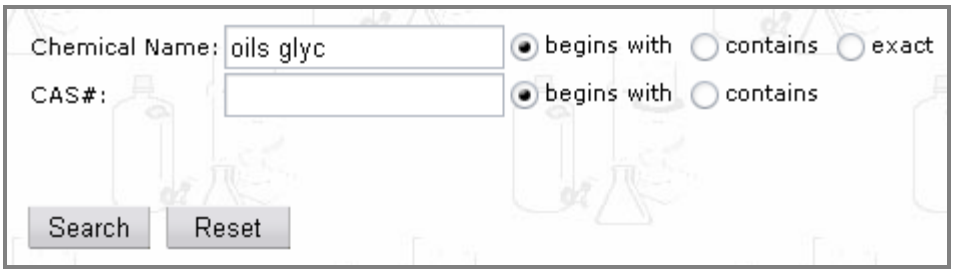
If the chemical name or the CAS# is NOT in CAD, the following message will appear: *There is no result matching your search.*

Check the spelling of the chemical name or the CAS#. If the spelling of the chemical name or the CAS# is incorrect, retype the correct name or CAS# into the appropriate field and click Search.

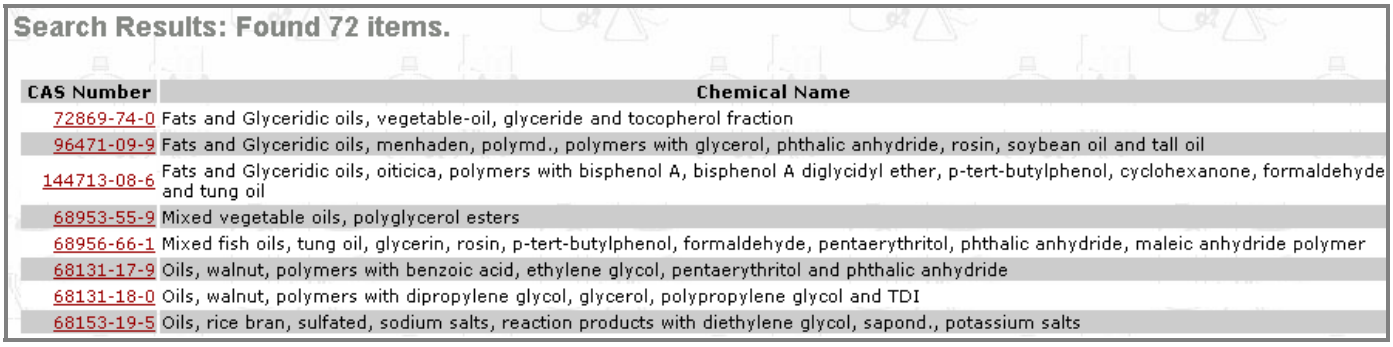
An Additional Feature of CAD Searches

There is an additional feature for looking up chemical container information by Searching CAD.

Many chemical names are very long. To generate a complete list of chemical names in CAD that begin and end with certain characters, place a whitespace between the beginning and ending characters. Whitespaces are generated by using the space bar. This option works when you click either ○ begins with or ○ contains. This option does not work if ○ exact is clicked. For example:



Click Search to accept the transaction. A complete list of chemical names in CAD that have the characters "before" the whitespace and "after" the whitespace will be generated, for example:


Search Results: Found 72 items.
CAS Number
Chemical Name
72869-74-0 Fats and Glyceridic oils, vegetable-oil, glyceride and tocopherol fraction
96471-09-9 Fats and Glyceridic oils, menhaden, polymd., polymers with glycerol, phthalic anhydride, rosin, soybean oil and tall oil
144713-08-6 Fats and Glyceridic oils, oiticica, polymers with bisphenol A, bisphenol A diglycidyl ether, p-tert-butylphenol, cyclohexanone, formaldehyde and tung oil
68953-55-9 Mixed vegetable oils, polyglycerol esters
68956-66-1 Mixed fish oils, tung oil, glycerin, rosin, p-tert-butylphenol, formaldehyde, pentaerythritol, phthalic anhydride, maleic anhydride polymer
68131-17-9 Oils, walnut, polymers with benzoic acid, ethylene glycol, pentaerythritol and phthalic anhydride
68131-18-0 Oils, walnut, polymers with dipropylene glycol, glycerol, polypropylene glycol and TDI
68153-19-5 Oils, rice bran, sulfated, sodium salts, reaction products with diethylene glycol, sapond., potassium salts

Click the **CAS#** to view

Transfer Container(s)

There are two options for transferring containers:

a. between different labs and "owners"
b. between different locations "owned" by the same user.

1. To use these functions, click the Inventory button at the top of the CHEMATIX™ screen:

2. You will now see the opening page for **Inventory Management** [IM400].

3. Scroll down to the following text:

Transfer Container(s)
Requests to Transfer a Container In
Requests to Transfer a Container Out
Request a Container Transfer from Another User
Transfer a Container within My Lab Locations

To transfer container(s), you have two options:

Option 1. Transfer Containers between Labs Assigned to Different Users

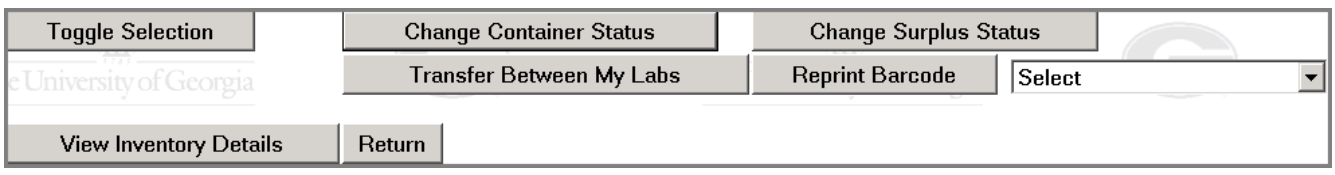
This option permits you to request a chemical container from another user.

Option 2: Transfer a Container with My Lab Locations

This option permits you to transfer single containers within your lab locations by scanning or entering the barcode.

NOTE:
There is another alternative to transfer containers within your lab locations. This alternative permits you to transfer, in one operation, multiple containers from one location to another by using check boxes ☐. There is, however, no scanning or barcode entry with this option.

To access this alternative, click the Inventory button in the bar menu at the top of the screen. Scroll down to the link View My Inventory Report. Click on this link and select the building to view the inventory and click Search Active Lab Inventory. Scroll down to the bottom of page [IM554] until you reach the bar menu:



Click Transfer Between My Labs, and you can begin to use this function. For more information, please refer to the **Inventory Management Module User Manual**.

Option 1a. Transfer Containers between Labs Assigned to Different Users - Principle

This container transfer process is a secure method for transferring containers between labs and users at one institution which is using CHEMATIX™.

In this option, there are two parties to the transfer process: the owner who "owns" the container and the "requester" who requests or asks for the container from the owner.

1. In order to request a container, the requester must identify the container's barcode. The barcode is the container's unique identifier. This, the requester can do by viewing the surplus list or through personal communication with the owner.

   To view the surplus list, click the Inventory button at the top of the CHEMATIX™ screen and scroll down to the link Search Campus Surplus Chemicals. For more information, please refer to the Inventory Management Module instruction manual.

2. The requester then submits a request to the owner for a chemical container by using the container's barcode.

3. The owner has the option to accept or to reject this request.

   The owner must inform the requester of his decision to accept or reject the request.

   Sometimes, there are multiple requests for one container. Once the owner accepts an offer from one requester, all other requests for the same container are rejected. Rejection notices are then automatically sent to the requesters whose requests have been rejected.

4. The successful requester then notifies the owner that he (the successful requester) has accepted or rejected the owner's offer or that he has read the owner's rejection memo.

   If the requester accepts the owner's offer, then, the requester completes a 'transfer-in". The container location is then updated to the desired location in the requester's inventory.

5. The container is then physically moved from the owner's location to the requester's location.

Option 1b. Transfer Containers between Labs Assigned to Different Users – Operation

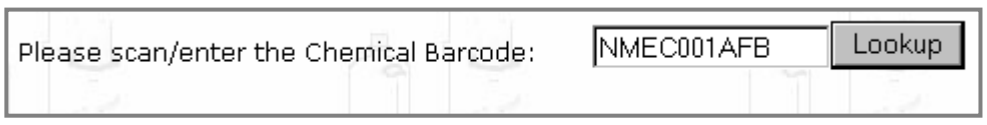
Step 1: Requesting a Chemical Container

1. To request a container, you (as the requester) must identify the barcode of the container that you wish to request. The barcode is the container's unique identifier. This, you can do by viewing the surplus list or through personal communication with the owner.

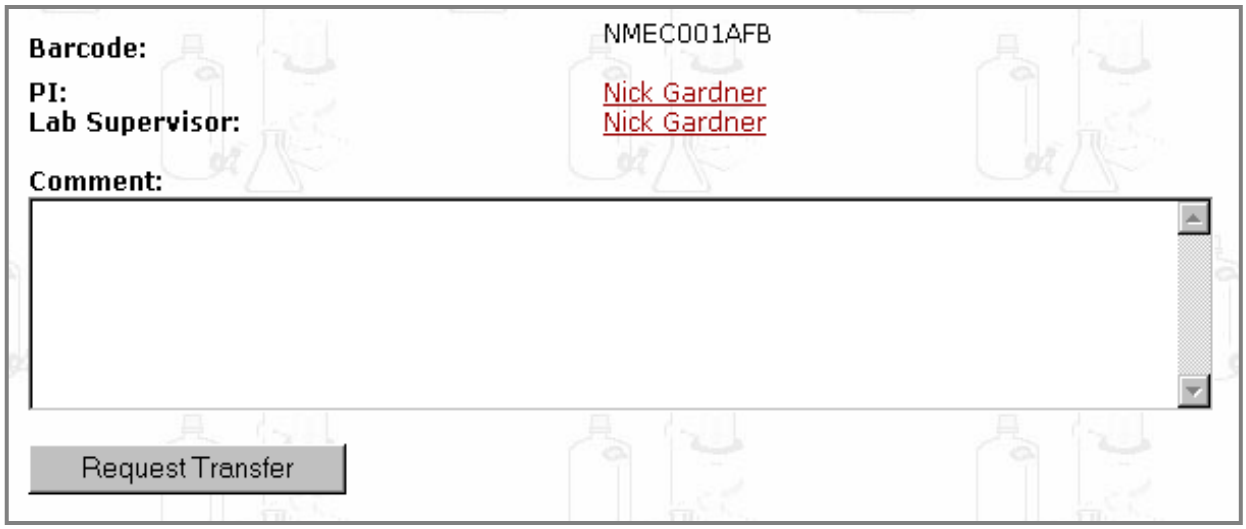
2. Click the link Request a Container Transfer from Another User (Option 3. above). You will now be transferred to the **Request Container Transfer** page [IM567].

3. Scan or enter the container's barcode into the barcode field (in this case barcode NMEC001AFB):

4. Click Lookup.



5. The barcode, PI, and Lab Supervisor information will appear on page [IM567]:



Click the links for the **PI:** or the **Lab Supervisor:** to obtain their contact information.

6. Write a comment or message in the **Comment:** data field.

7. Click Request Transfer to request the transfer of this chemical to your laboratory.

8. The following text will appear at the top of your screen:

9. You can check to make sure that such a request has been sent by clicking on the link Requests to Transfer a Container In . You will be transferred to the following page [IM568].

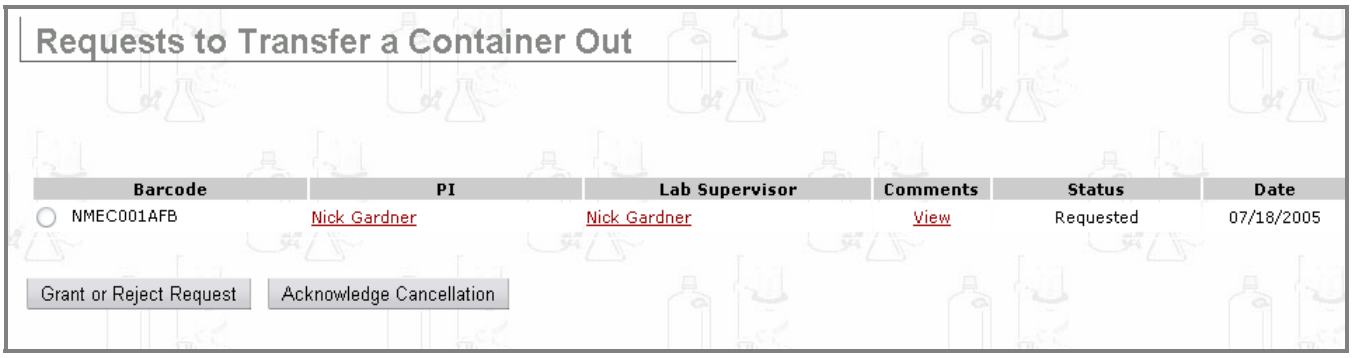
The **Barcode**, **PI**, and **Lab Supervisor**, refer to the "owner" of the container.

The **Comments** are the comments of the "requester" to the "owner". Click these links for more information.

Step 2: The Owner Accepts or Rejects the Requester's Transfer Request

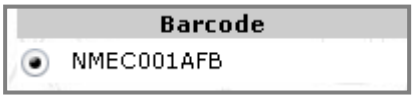
The owner of the container has received a request to transfer a container out of his lab.

10. To view such requests, the owner clicks on the link Requests to Transfer a Container Out and is transferred to page [IM569]:



The **Barcode**, **PI**, and **Lab Supervisor**, refer to the "owner" of the container. The **Comments** are the comments of the "requester" to the "owner". Click these links for more information.

11. The owner then clicks the radio button next to the barcode (in this case, barcode NMEC001AFB), and clicks Grant or Reject Request. The owner is transferred to page [IM570]:



The owner can click the **Barcode:** link (in this case, barcode NMEC001AFB) to view container details or the **Requester:** link to view contact details of the requester.

12. The owner can now grant or reject the transfer request.

    If the owner accepts the request, the [Grant Transfer Request] button is clicked and a confirmation message appears at the top of page [IM569]:

    If the owner rejects the request, the [Reject Transfer Request] button is clicked and a rejection message is returned by the system at the top of page [IM569]:

    The requester must now acknowledge the rejection by either:

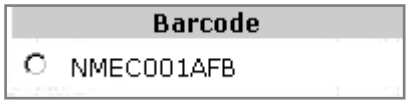
    a. clicking the link Requests to Transfer a Container In , or
    b. clicking the radio button next to the appropriate barcode, and thereafter clicking the [Acknowledge Rejection] button.

Step 3: The Requester Accepts or Rejects the Owner's Transfer Request

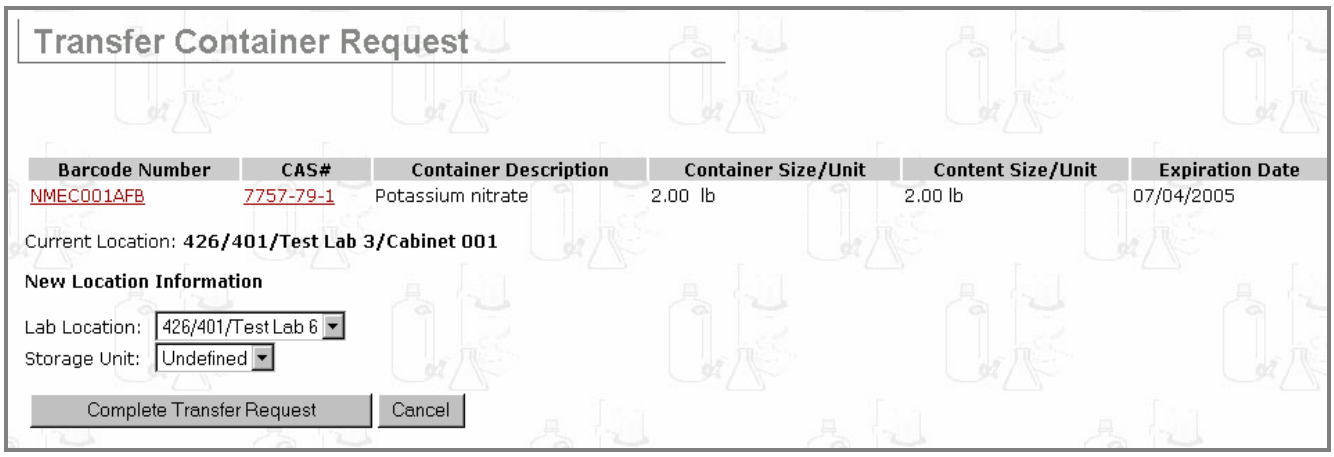
The requester of a container has received approval by the owner to transfer a container into his (the requester's) lab.

13. To view such requests, the requester clicks on the link Requests to Transfer a Container In and is transferred to page [IM568]:

14. To complete the "transfer-in", the requester clicks on the radio button next to the barcode:



15. The requester then clicks [Complete Transfer In] and is transferred to page [IM621]:



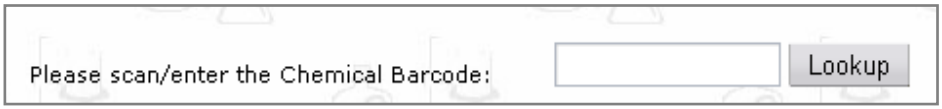
16. The requester selects the [Lab Location:] and the [Storage Unit:] in his lab from the drop-down menus, and then clicks [Complete Transfer Request]. A confirmation message will now appear at the top of page [IM568].

The container has been successfully transferred into the requester's lab location.

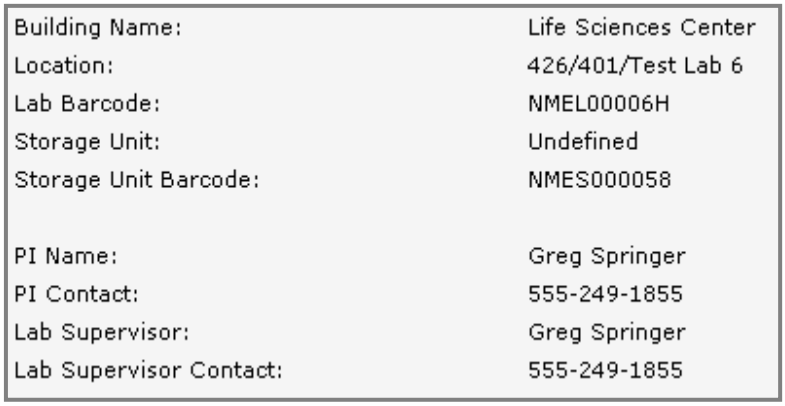
17. The requester can check to see if the container is actually now part of his inventory. The requester can do this in one of two ways:

Choice 1: Verify Transfer via Barcode Entry

Click the [Inventory] button in the bar menu at the top of the screen. Enter the barcode into the following field at the top of the main Inventory page [IM400]:

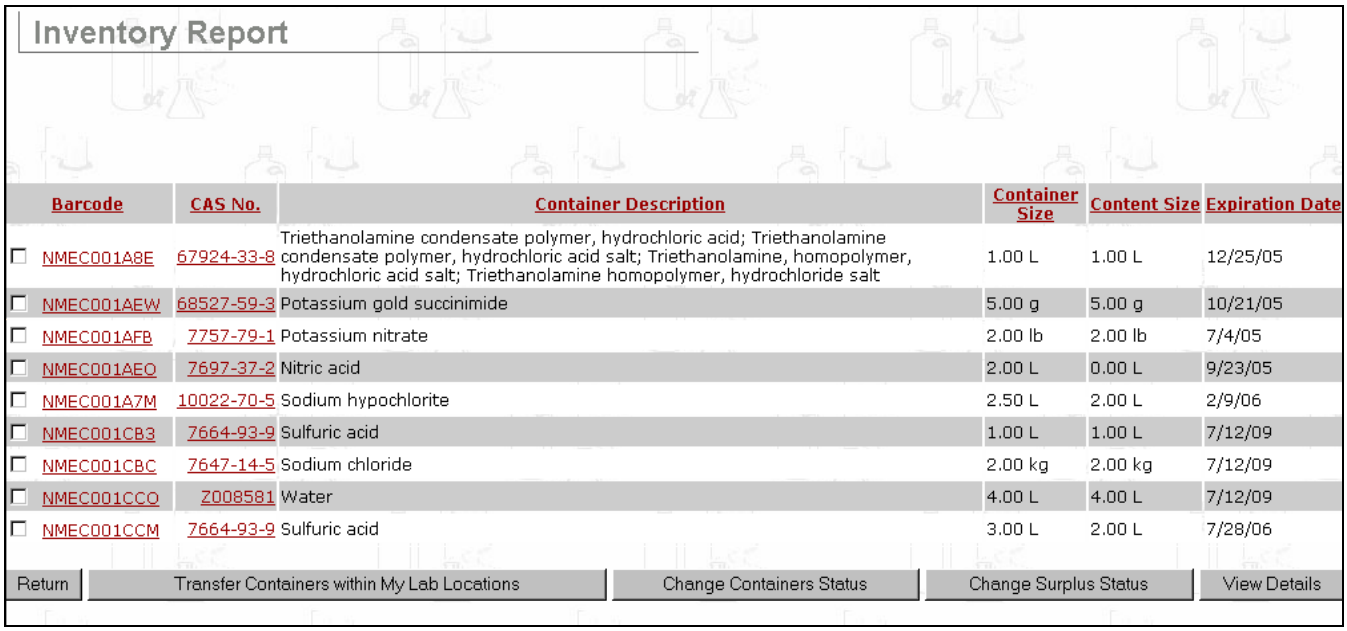


Click [Lookup]. You will be transferred to the **Container Details** page [SC430] where you can check the location of the container. If the container is in your lab or location, the container is in your inventory, for example:



Choice 2: Verify Transfer via Inventory Report

Click the Inventory button in the bar menu at the top of the screen. Scroll down and click on the link View My Inventory Report. You (the requester) will now be transferred to your **Inventory Report** page [IM554].



Inventory Report

Barcode	CAS No.	Container Description	Container Size	Content Size	Expiration Date
NMEC001A8E	67924-33-8	Triethanolamine condensate polymer, hydrochloric acid; Triethanolamine condensate polymer, hydrochloric acid salt; Triethanolamine, homopolymer, hydrochloric acid salt; Triethanolamine homopolymer, hydrochloride salt	1.00 L	1.00 L	12/25/05
NMEC001AEW	68527-59-3	Potassium gold succinimide	5.00 g	5.00 g	10/21/05
NMEC001AFB	7757-79-1	Potassium nitrate	2.00 lb	2.00 lb	7/4/05
NMEC001AEO	7697-37-2	Nitric acid	2.00 L	0.00 L	9/23/05
NMEC001A7M	10022-70-5	Sodium hypochlorite	2.50 L	2.00 L	2/9/06
NMEC001CB3	7664-93-9	Sulfuric acid	1.00 L	1.00 L	7/12/09
NMEC001CBC	7647-14-5	Sodium chloride	2.00 kg	2.00 kg	7/12/09
NMEC001CCO	Z008581	Water	4.00 L	4.00 L	7/12/09
NMEC001CCM	7664-93-9	Sulfuric acid	3.00 L	2.00 L	7/28/06

Return | Transfer Containers within My Lab Locations | Change Containers Status | Change Surplus Status | View Details

If the chemical container has been successfully transferred from the "old owner's" lab into your lab (as the requester), the chemical will be found in your inventory (in this case, barcode NMEC001AFB on line three).

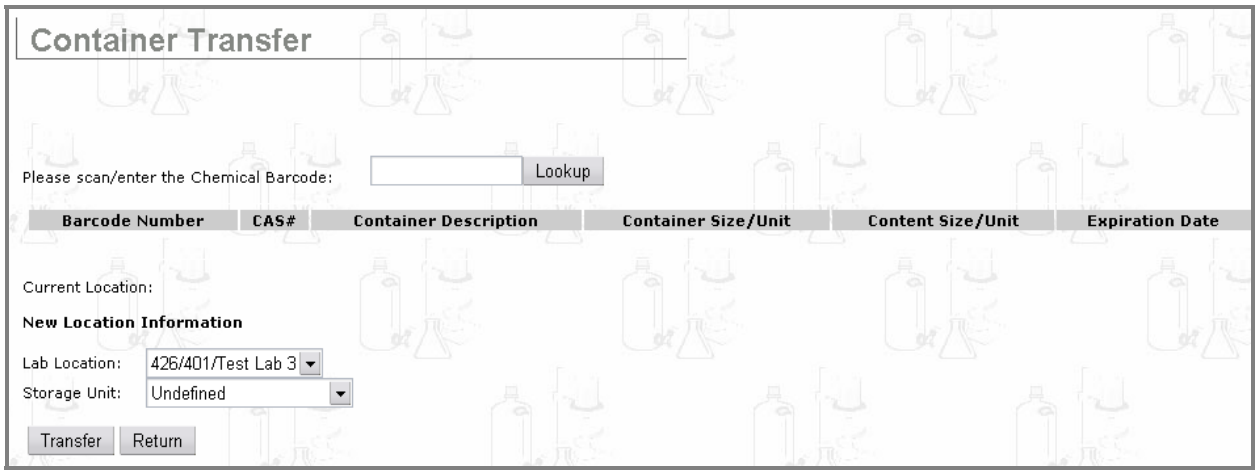
NOTE:
Make sure that the container is physically moved from the "old" owner's location to its "new" owner's location. The "new" owner (the requester) is now responsible for the chemical container.

The transfer record of every container is given on the **Container Details** page [SC430] for that specific container. To check the transfer history of a container, click any barcode link for that container in CHEMATIX™. Then, scroll down to the bottom of the page to view the transfer history.

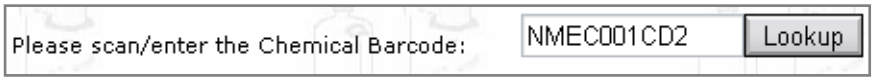
Option 2. Transfer a Container within My Lab Locations

1. To transfer a container within my lab locations, you must identify the barcode of the container that you wish to transfer. The barcode is the container's unique identifier.

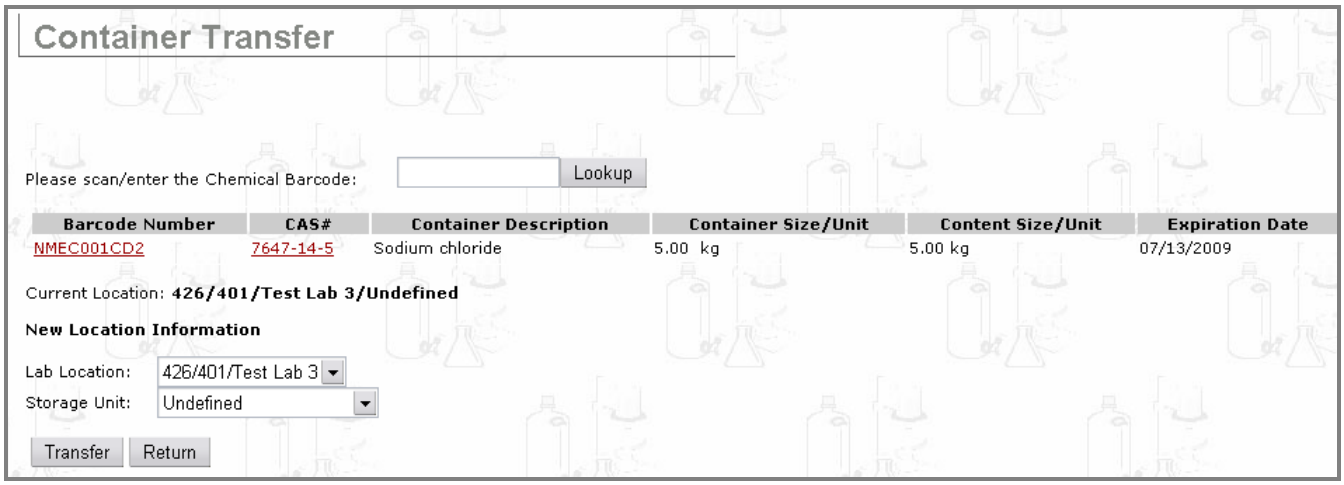
2. Click the link Transfer a Container within My Lab Locations to transfer to page [IM563]:



3. Scan or enter the barcode number of the container that you wish to transfer (in this example, barcode NMEC001CD2) and enter the barcode into the appropriate field as follows:



4. Click Lookup. The container details will appear on the **Container Transfer** page [IM563]:



Click the **Barcode Number** link to view container details.

Click the **CAS#** link to view the Chemical Abstract and MSDS information.

5. Choose the new Lab Location: and the new Storage Unit: from the drop-down menus.

6. Click Return to return to the main Inventory Module main page [IM400] without making any changes to your inventory.

Click Transfer to transfer the container to its new location.

The message *The containers have been transfered successfully.* will now be displayed at the top of the screen:

7. Your container has now been successfully transferred from one location to another within your lab.

   NOTE:
   a. Make sure that the container is physically moved from its "old" location to its "new" location. You are responsible for the chemical container and updating its location.
   b. The transfer record of every container is given on the **Container Details** page [SC430] for that specific container. To check the transfer history of a container, click any barcode link for that container in CHEMATIX™. Then, scroll down to the bottom of the page to view the transfer history.

Transfer History of a Chemical Container

For future tracking purposes, CHEMATIX™ retains all information (including transfer history) on a chemical container, even though that container has been removed from your inventory. Chemical container information is never deleted from CHEMATIX™.

To check the transfer history of a container, click any barcode link for that container in CHEMATIX™. You will be transferred to the Container Details page [SC430] for that specific container. Scroll down to the bottom of the page to view the transfer history of that container (as in the following example):

TRANSFER HISTORY

Date	From Person	From Location	To Person	To Location
Jul 18, 2005 10:09:28 AM	Nick Gardner	426/401/Test Lab 3/Cabinet 001	Greg Springer	426/401/Test Lab 6/ Undefined

Appendix #1: Add Chemical Container(s) to Your Inventory -- Flowchart

- Step 1: Look up and Enter Chemical Information [IM535]
  - Choice 1: Entering Manufacturer/Vendor Part Number (Go on to Step 2)
  - Choice 2: Selecting a Chemical from the Common Chemical List (Go on to **Step 2**)
  - Choice 3: Searching CAD
    - If the chemical name is in the CAD database … (Go on to **Step 2**)
    - If the chemical name is NOT in the CAD database
    - Alternative 1: Check and correct any typos (Go on to **Step 2**)
    - Alternative 2: Adding a "new" Chemical to CAD
      - Selection 1: Write a brief note regarding this chemical (Go on to **Step 2**)
      - Selection 2: Create a new Chemical Abstract in CAD
        - Part 1: Write comments
        - Part 2: Entering Chemical Information (Go to **Part 3** *or* Go to **Part 13**)
        - Part 3: NFPA Hazard Rating
        - Part 4: General Hazards including PEC
        - Part 5: DOT Hazardous Material Data
        - Part 6: Environmental Law
        - Part 7: Exposure Limits
        - Part 8: Carcinogen Status
        - Part 9: Risk Phases
        - Part 10: Safety Phrases
        - Part 11: Physical Characteristics
        - Part 12: To Finish
          - **Option 1: Reset** (Go on to **Part 1**)
          - **Option 2: Save & Request Review** (Go on to **Step 2**)
        - Part 13: Search an Existing Chemical Abstract
          - **If your chemical has no CAD listing**… (Go back to **Part 1**)
          - **If your chemical has a CAD listing**… (Go back to **Part 1**)
    - An Additional Feature of CAD Searches

- Step 2: Enter Container Information [IM536]
  - **Choice 1: Submit** (Go on to **Step 3**)
  - **Choice 2: Clear** (Stay on this page)
  - **Choice 3: Cancel** (Go to **Step 1**)

- Step 3: Enter, Generate, and Print Barcode Labels [IM537]
  - Option 1: Using Avery Label 05266 (3 X 10) or equivalent
  - Option 2: Using an Intermec 3400e dedicated barcode printer or equivalent
  - Option 3: Using pre-generated labels

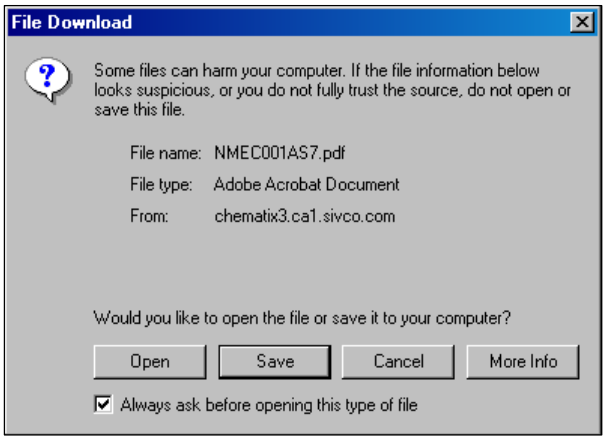
Appendix #2 - Printing Barcodes

1. The barcodes have now been generated. Next, you need to print them.

2. Open popup window page [IM221] (if it is not already open on your screen):

3. Click on the link Barcodes PDF.

4. If the check box Always ask before opening this type of file is checked, the following popup window will be displayed:


File Download
Some files can harm your computer. If the file information below looks suspicious, or you do not fully trust the source, do not open or save this file.
File name: NMEC001AS7.pdf
File type: Adobe Acrobat Document
From: chematix3.ca1.sivco.com
Would you like to open the file or save it to your computer?
Open
Save
Cancel
More Info
Always ask before opening this type of file

Click Save to save the PDF barcode file to your computer for later use.

Click Open to open the PDF barcode file.

If the Always ask before opening this type of file check box is not clicked, you will jump directly from Step 3 to Step 5.

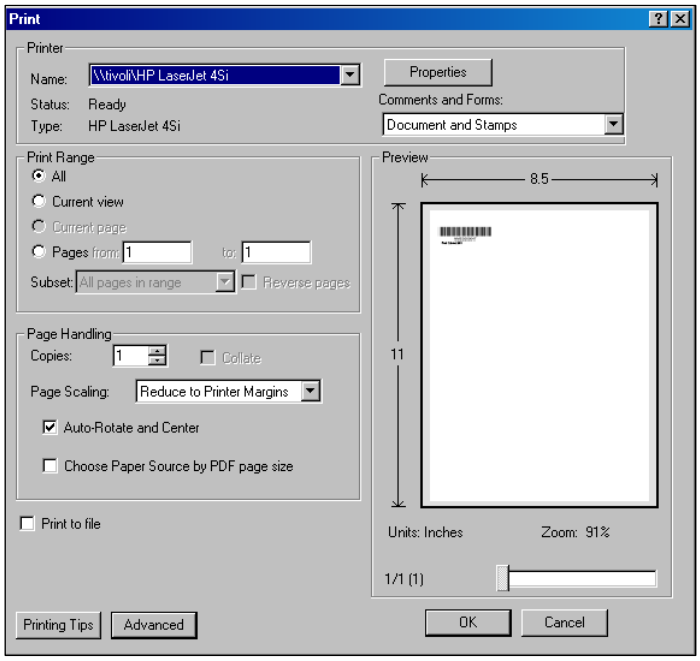
5. Adobe Reader will now open and display the barcode label(s) to be printed in the locations that you specified on the label sheet.

6. Make sure that your label sheet(s) has (have) been inserted into the correct printer. The default label is 3x10 format (three columns by ten rows).

7. To print, click the printer icon in the menu bar at the top of the Adobe Reader page.

   Alternately, click File in the menu at the top of the screen and choose Print... from the drop-down menu.

8. The print popup window will now open (as in the following example from Windows):



9. Choose your printer options, for example the printer where you wish to print the barcodes.

10. Once you have selected your printer options, click OK to begin printing or click Cancel to abort.

11. After printing the barcode(s), return to your previous page in this manual to continue processing your inventory.

Appendix E
Environmental Safety Suite

Appendix E – Environmental Safety Suite

SIVCO has taken on the responsibility of protecting human health and the environment through the ongoing development of software products for the environmental health and safety industry. All components of the Environmental Safety Suite are designed as web-enabled, enterprise applications built upon J2EE technology. This allows each solution to be easily integrated with other systems and for all solutions to be fully implemented in conjunction as one complete Environmental Safety Enterprise Solution. Each innovative solution within the Environmental Safety Suite also has the unique ability to be implemented and operated individually, providing precise solutions for specific mandates relating to Chemical Management, Bioagent Material and Research Permit Management, OSHA Reporting, Hazardous Training Management, etc.

Each of the **Environmental Safety Suite** software products is:

- scalable
- fully customizable
- able to integrate with existing authentication systems
- fully integrated with **CHEMATIX™** and the each of the other **Environmental Safety Suite** applications

We invite you to review the currently available software solutions as well as the upcoming products currently under development. If protecting the environment and ensuring community safety according to governmental mandates through accurate reporting, complete record management and comprehensive inventory control of all scientific materials throughout their entire system life-cycle is your business, let SIVCO assist you in meeting your needs with the most innovative and comprehensive suite of Environmental Safety Solutions available.

SIVCO's Environmental Safety Suite features the following innovative products:

BIOLOGISTIX™

BIOLOGISTIX™ is at the forefront of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with all governmental regulations and mandates. Widely considered the premier solution on the market today, **BIOLOGISTIX™** provides a comprehensive approach to chemical management throughout the entire lifecycle of chemical, biological, radioactive and hazardous substances within large-scale university and corporate research environments.

Comprised of seven major management modules, **BIOLOGISTIX™** easily facilitates:

- **Biological Material Tracking**
- **Inventory Management and Control**
- **Biosafety Permit and Inspection Governance**
- **Biosafety Labs and Cabinet Regulation**
- **Resource Management and System Security**

The ultimate goal is to provide universities and research firms with the ability to:

- make bioagent inventory management an effortless and simple process by reducing the amount of labor and frustration involved in tracking biological material inventory
- fully govern the issuance and management of biosafety permits for biological substances
- efficiently manage biosafety labs, cabinets, autoclave licensing and inspections
- empower users with information presented in a well organized, concise and highly usable manner
- reduce overall labor, administration, paper and surplus costs resulting in significant annual savings
- readily facilitate regulatory compliance by providing the frame work in which all governing agencies can monitor and control biological inventory

With broad functionality to facilitate Biological Material Tracking, Inventory Management, Biosafety Permit and Inspection Governance, Biosafety Labs, Cabinet Regulation and Resource Management, **BIOLOGISTIX™** is at the forefront of research management by providing the most rigorous and robust environment in which to track controlled substances and maintain compliance with governmental regulations and mandates. The main modules include:

Biological Material Inventory Management

Biological Material Inventory Management is the essential management module, which allows **BIOLOGISTIX™** to store detailed information about every regulated substance in the system. This detail provides the foundation for regulatory compliance, environmental safety, and inventory, research, and budget control. All substances are tracked via unique identifiers associated with approved biosafety permits, research project approval and responsible owner certification. Storage location including laboratories, biosafety cabinets, freezers, autoclaves and specific shelves are also associated with biological inventory. A complete history of each regulated agent is maintained from point of entry to elimination as waste. This module also provides the big picture view of biological material tracking and the ability to manage various aspects of regulated laboratory inventory of controlled substances. A multitude of user-configurable reports and views can be generated to view specific location inventories, hazardous material counts, historical profiles, inspection histories, etc. The scope of this module includes:

- tracking of biological material description, bioagent class, risk group, select agent status, associated strain, associated insert(s), container size, origin, specimen source, responsible owner, storage location (shipping address, building name and number, laboratory room number, specific storage location (cabinet, shelf, freezer, etc.), vendor (manufacturer) name, purchase (receipt) date and quantity
- ability to associate bioagent, principal investigator, and location to bioagent profiles from pre-populated drop-down lists
- maintenance of a master list of regulated bioagents by Environmental Health and Safety with associated class, description, strain and insert(s)
- instant access to real-time inventories for every campus location containing biological material inventory tracked by the system, complete with location address and responsible owner
- comprehensive and user-defined report generation of inventory summaries for campus-wide, departmental and individual laboratory bioagent inventory records by associated personnel (administrators, faculty, staff, graduate students, etc.) and Environmental Health and Safety regulators searchable by item description, bioagent class, risk group and selected agent status
- pre-loaded list of biological material supply vendors and manufacturers available as a drop-down list for association with new and/or existing inventory
- ability of users to associate biological agents with new manufacturers/vendors with automatic addition of new entries to existing lists
- strict control of bioagent inventory through mandatory association with biosafety permits, approved research projects, licensed biosafety cabinets and training certification for users and principal investigators.

Biosafety Permit Control

Biosafety Permit Control allows regulatory officials to comprehensively oversee the issuance, review, and regulation of biosafety permits required for the acquisition, control, and storage of regulated biological substances for use in scientific research. Biosafety Committee management as related to biosafety permits is also facilitated. Some of the highlights include:

- tracking of all biosafety permits according to permit number, permit type, principal investigator, approved bioagents (bioagent class, risk group and selected agent status),

associated research project, associated usage locations, storage location, approved users, animals involved in research (IACUC number), associated biosafety cabinets, approval date, expiry date, permit status, description, associated amendments, contingencies and modifications, review date, inspection date, biosafety committee actual review date and audit frequency
- capacity to sort and print biosafety permit reports based on permit type, permit status, review date, biosafety committee actual review date, expiration date, principal investigator, bioagent description, bioagent class, risk group and select agent status
- ability to add principal investigators, permit types, permit status, bioagents, locations, users and research animals to biosafety permits from pre-populated drop-down lists
- ability of biosafety committee members to modify, amend and add contingencies to permits
- maintenance of all biosafety committee members as users in the system
- capacity to generate biosafety committee agendas from existing and newly submitted biosafety permits
- email notification to all biosafety committee members of upcoming agendas with references to be reviewed and/or approved

Biosafety Cabinet Regulation

Biosafety Cabinet Regulation consists of complete management over the licensing and inspections of biosafety cabinets, autoclaves and laboratories used for the proper handling of biological materials. Detailed information about each cabinet registered in the system as well as associated inspection history is captured according to:

- biosafety cabinet profile, including cabinet ID, responsible principal investigator(s), permit number, permit expiry, serial number, make/model, manufacturer, location, class, UV light status and cabinet description
- ability to associate location, manufacturer, make/model and class with biosafety cabinet profile from pre-populated drop-down lists
- biosafety cabinet inspection profile, including inspection date, inspector name, UV light reading, approved status and comments/recommendations
- control of biosafety cabinet master list by Environmental Health and Safety personnel
- user-configurable report generation of biosafety cabinet information sortable by location, principal investigator, permit expiry, class, status, inspection date and permit number
- comprehensive biosafety cabinet inspection history report generation

Resource Management

Resource Management provides and restricts access to all levels of the **BIOLOGISTIX™** system. User profiles are created for varying levels of access including individual users, departments, regulators and committee members. User administration is constructed hierarchically to ensure maximum system security. The highlights of this module are:

- username and password access to system
- hierarchical chain of command system security with broadest range of access and control granted to primary levels
- superuser administration with ability to add/modify user profile and restrict access to system
- maintenance of emergency contact information including name and phone number
- departmental (or multiple departmental) association with users and locations
- designation of principal investigators responsible for bioagent inventory and locations
- designation of Active Permit Authority status for all users, which grants / restricts viewable inventory privileges and outlines specific privileges regarding the handling of regulated biological materials and proper waste disposal

- complete management of all biological material handling and safety training, including class enrollment. scheduling, certified status and access authority
- accommodation of different levels of security for administrative personnel
- access to all areas of the system governed by specific administrative personnel
- emergency response team access to all biological inventory and hazardous materials in critical situations, with the ability of transmitting biological inventory information to handheld web-enabled devices of responders
- ability for all users to modify personal profile and password
- ability to integrate with campus authentications system

Radioactive Material Manager

Designed to comprehensively track and manage radioactive material purchase, possession, use and disposal, this innovative solution has full functionality to:

- universally track detailed profiles of radioactive material inventory, equipment and radiation emitting devices
- manage online submission of authorization requests and isotope permits required for the procurement, possession, use and disposal of radioactive substances
- associate all radioactive materials inventory with approved protocols, possession limits, requisitions, required user training, equipment certification and lab registration
- comprehensively track and manage generation and disposal of all radioactive waste
- maintain detailed profiles, associated registration information and inspection histories for equipment, devices and approved laboratories in which radioactive materials will be handled and stored
- manage inspections and incidents for laboratories, storage devices, leak tests and instrument calibration with maintenance of detailed histories
- control possession limits of radioactive materials for PIs, labs, buildings and departments through association of physical inventory with all isotope requisitions pending approval
- create a broad variety of standard and ad-hoc reports for radioactive material inventory, isotope permits and possession authorizations, equipment, registered labs, waste accumulation and disposal, user training profiles and possession limits
- maintain detailed training information for users requiring certification to possess and use radioactive materials
- track contamination, area monitoring and leak tests
- facilitate procurement of radioactive materials with strict, hierarchical approval process and association with possession and use permits
- ability to interface with existing financial management systems to process radioactive material order information

Training Records Manager

The Training Records Management System provides web-enabled access to all employee and student training records pertaining to all required certifications necessary to ensure community and personal safety as well as safe work practices.

This comprehensive system will provide user access to existing certification levels, pending expiry dates, training course descriptions, specific employment requirements, online class sign-up, and training history in compliance with local, state and federal requirements for radiation, chemical, biological, hazardous waste, and environmental safety.

Online Accident Reporting System (OARS)

The **Online Accident Reporting System (OARS)** has been developed to make reporting easier, provide consistency in reporting data, assess trends and ultimately contribute to injury prevention. Originally developed in conjunction with leading research institutions, the intention of the system is to electronically automate the process of reporting work-related injuries and illnesses on campus through an offering of mandatory forms via online access.

OARS features:

- online submission of accident and near miss reporting
- the processing and updating of OSHA forms
- the ability to track, review and modify existing reports
- access for Environmental Health & Safety personnel to review and modify submitted reports
- the processing of the OSHA 300 log form
- the processing of OSHA 300 summary worksheets
- the ability to connect with university ID and authentication systems
- e-mail notification for report submission and review

Accurate and timely reporting of work-related injuries, illnesses and near misses is critical to providing a safe and healthful work environment. **OARS** has been developed to comply with the new OSHA record keeping rules.